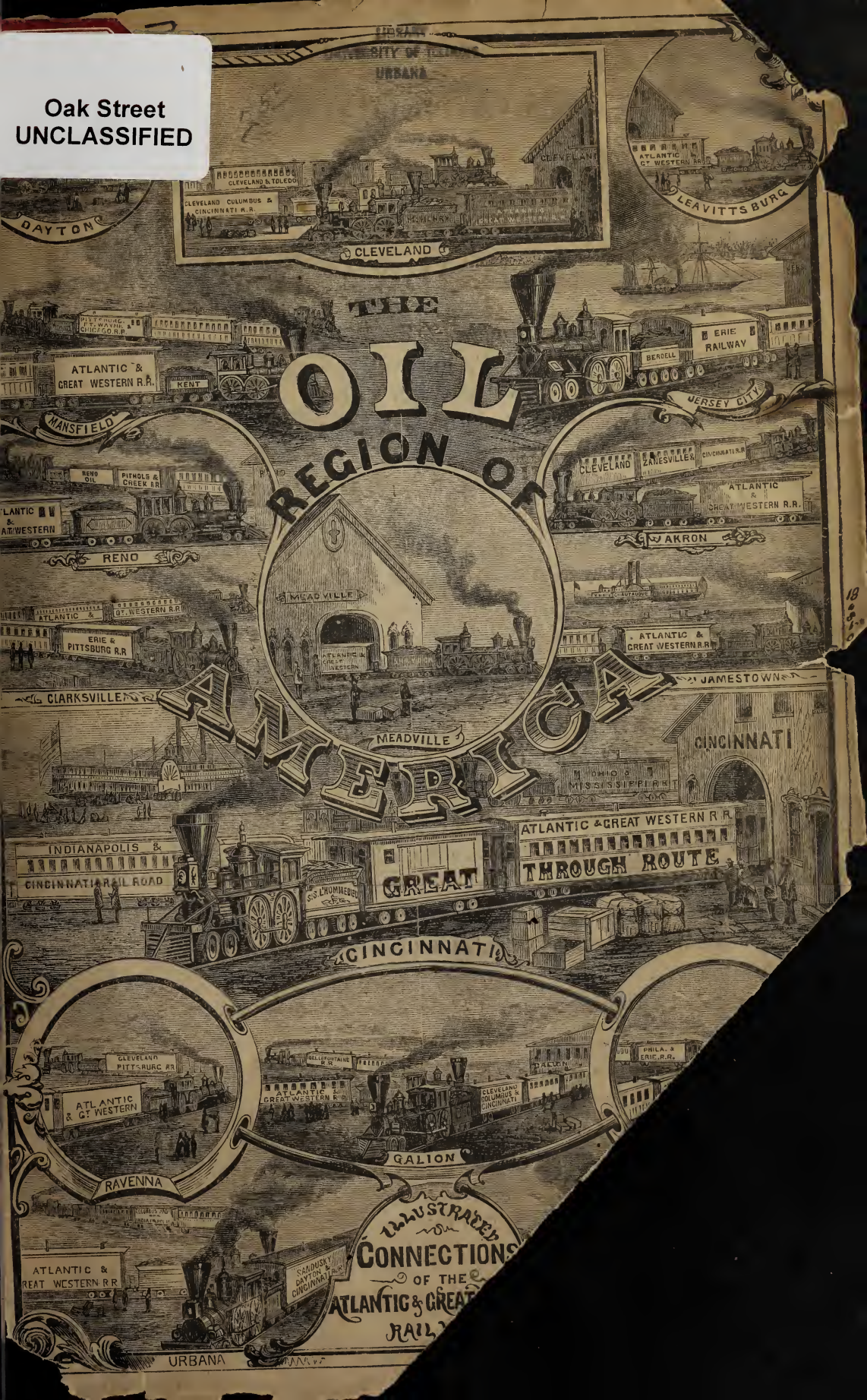


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THE
OIL
REGION OF
AMERICA



ILLUSTRATED
CONNECTIONS
OF THE
ATLANTIC & GREAT
RAIL

CONNECTIONS

OF THE

ATLANTIC AND GREAT WESTERN

RAILWAY:

Cincinnati	Ohio & Mississippi Railroad.
Cincinnati	Indianapolis & Cincinnati Railroad.
Cincinnati	Kentucky Central Railroad.
Cincinnati	Louisville Steamers.
Hamilton	Eaton & Hamilton Railroad.
Hamilton	Indianapolis Junction Railroad.
Dayton	Indiana Central and Dayton & Western Railroads.
Dayton	Dayton & Toledo Railroad.
Dayton	Sandusky, Dayton & Cincinnati Railroad.
Dayton	Dayton & Union and Xenia & Belpre Railroads.
Urbana	Sandusky, Dayton & Cincinnati Railroad.
Urbana	Indianapolis & Columbus Railroad.
Galion	Bellefontaine Railroad.
Galion	Cleveland, Columbus & Cincinnati Railroad.
Mansfield	Pittsburg, Fort Wayne & Chicago Railroad.
Mansfield	Sandusky, Mansfield & Newark Railroad.
Akron	Cleveland, Zanesville & Cincinnati Railroad.
Ravenna	Cleveland & Pittsburg Railroad.
Cleveland	Cleveland & Toledo Railroad.
Cleveland	Cleveland, Columbus & Cincinnati Railroad.
Cleveland	Detroit Steamers.
Pittsburg ..	Cleveland Branch of the Atlantic & Great Western Railroad.
Pittsburg ..	Mahoning Branch of the Atlantic & Great Western Railroad.
Pittsburg ..	Erie & Pittsburg Railroad.
Pittsburg ..	Reno, Pithole & Oil Creek Railroad.
Pittsburg ..	Pithole & Oil City Railroad.
Pittsburg ..	Franklin & Oil City Branch of Atlantic & Great Western Railroad.
Pittsburg ..	Oil Creek Railroad.
Pittsburg ..	Oil Creek & Erie Railroad.
Pittsburg ..	Oil Creek Steamer.

THE

ATLANTIC AND GREAT WESTERN RAILWAY.

CONNECTIONS, STATIONS, DISTANCES, MAP,
&c., &c.

The Great Through Route

BETWEEN THE EAST AND WEST, NORTHWEST, SOUTH, AND
SOUTHWEST.

NEW YORK: .
DESIGNED AND COMPILED BY H. H. SIMMONS.
1866.

Atlantic and Great Western Railway Company.

T. W. KENNARD, Engineer-in-Chief, New York.

McANDREW & WANN, Financial Agents, New York.

S. S. L'HOMMEDIEU, President, Cincinnati, Ohio.

J. J. SHRYOCK, Vice President, Meadville, Pennsylvania.

J. M. DICK, Treasurer, Meadville, Pennsylvania.

J. C. CALHOUN, Secretary and Auditor, Meadville, Pennsylvania.

D. McLAREN, General Superintendent, Meadville, Pennsylvania.

J. M. OSBORN, General Freight Agent, Meadville, Pennsylvania.

E. F. FULLER, General Ticket Agent, Cincinnati, Ohio.

ATLANTIC AND GREAT WESTERN RAILWAY.

THE line of road known as the Atlantic and Great Western Railway is now one of the great through routes of trade and travel between the East and the West. Although it is not quite six years since this enterprise was commenced, there are now 507 miles of line in operation. The rapid progress made in the construction of this railway has never been surpassed. A *correct* history of the undertaking may be interesting to the friends of the enterprise, as well as to the great traveling public. So suddenly has this line been brought into operation, that very little is known by the commercial and financial world of its inception and progress. We therefore propose to present a history, as condensed as possible, of the small local railroad projects which have in so short a time become one of the most prominent and influential corporations in America.

The Erie and New York City Railroad.—In September, 1850, a meeting of public-spirited citizens was held at Jamestown, N. Y., to discuss the project of building a road from the mouth of Little Valley Creek (now known as Salamanca), a point on the Erie Railway 414 miles from New York, to the city of Erie, Pa.

The attention of the directors of the New York and Erie Railroad, and others interested in that line of road, had been frequently called to the importance of extending their road to the harbor of Erie; and the route via Randolph and Jamestown, N. Y., was represented as being very feasible.

Such men as Hon. B. Chamberlain, and T. S. Sheldon, Esq., of Randolph, N. Y.; Col. A. F. Allen, Samuel Barrett, Esq., William Hall, Esq., Col. Henry Baker, and others, of Jamestown, N. Y., well known in Western New York for their energy and liberality in pushing forward needed public improvements, caused surveys of the route to be made in November and December, 1850. Nothing farther was done until July, 1851, when a company with the above title was formally organized, and in March, 1852, the line of road was located. In May, 1853, the whole line from Salamanca to Ashville, a distance of 38 miles, was under contract for construction, and the grading progressing favorably. On account of financial difficulties the work was very much retarded; still, the grading was pushed along with considerable energy until January, 1855, when all work was discontinued, the means of the company having become exhausted.

The Meadville Railroad.—In July, 1857, certain citizens of Meadville, Pa., organized a railroad company, under the above title, to construct a road through the counties of Crawford and Mercer, Pa.

Prominent in this movement we find such public-spirited gentlemen as William Reynolds, Esq., Gen. John Dick, Hon. G. Church, J. J. Shryock, Esq., Jas. R. Dick, Esq., Hon. D. A. Finney, and others, of Meadville, Pa.

In pursuance of the powers granted this company in their charter, a purchase was made of all the property, privileges, rights, and franchises of the Pittsburg and Erie Railroad Company within the counties above mentioned, which embraced the line of proposed road.

The usual preliminary proceedings connected with an enterprise of this kind were not fully completed until some time in the year 1858, when, for a period of several months, very little was done to push forward this great public work, which the rapidly-growing business of Northwestern Pennsylvania so much required.

Franklin and Warren Railroad.—A company was organized in Ohio, in June, 1851, to build a road, with the above title, from Franklin, Portage county, to Warren, Trumbull county, Ohio, with power to extend said road to a point in the eastern line of the State of Ohio, northeast of Warren, Trumbull county, and southwesterly to Dayton.

Prominent in this scheme were such well-known citizens of Ohio as Thos. Earl, Esq., Zenas Kent, Esq., Marvin Kent, Esq., of Portage county; L. V. Bierce, Esq., D. Upson, Esq., of Summit county; F. Kinsman, Esq., Hon. R. P. Ranney, and J. W. Tyler, Esq., of Trumbull county.

In 1852 and 1853, little more was done than to complete the organization of the company, securing subscriptions to capital stock, etc., etc.

In July, 1853, operations were actively commenced along the whole line. The construction, however, was retarded from its commencement by financial and other embarrassments attending a work of this magnitude.

The Atlantic and Great Western Railways.—During the summer of 1852, some gentlemen in Pennsylvania and Ohio proposed the project of continuing the broad gauge of the Ohio and Mississippi Railroad through Ohio, Northwestern Pennsylvania, and Southwestern New York, to connect with the New York and Erie Railroad. An examination of the country for a

road was made, when it was found that the *best* route was that which would use the Erie and New York City Road from a point east of the mouth of Little Valley Creek to near Ashville, N. Y., about 41 miles from the above starting-point, and about 8 miles from the southern line of the State of New York, thence running south-westwardly through Meadville, Pa., Warren, Kent, Akron, and Galion to Dayton, O., a total distance of 388 miles.

This grand plan for a great broad-gauge through line from the city of New York to the city of St. Louis, 1200 miles in length, was submitted, in November, 1856, to the directors of the three local companies above referred to, and favorable action taken thereon.

In September, 1854, the Franklin and Warren Railroad Company availed itself of the provisions of an act enacted by the General Assembly of the State of Ohio, January 12, 1853, authorizing incorporated companies to change their names, and adopted the name of "The Atlantic and Great Western Railroad Company."

In the spring of 1858, the Meadville Railroad Company, by authority of the Legislature of the State of Pennsylvania, changed its corporate name to "The Atlantic and Great Western Railroad Company of Pennsylvania."

In the month of May, 1859, a company was organized in the State of New York, under the name of "The Atlantic and Great Western Railroad Company in New York," which purchased, in 1860, of the before-mentioned Erie and New York City Railroad Company, 38 miles of their road, being that portion of the line in the State of New York extending from Salamanca to near Ashville. These 38 miles, with 11 miles of new line, make up the entire length of line of the "Atlantic and Great Western Railroad Company in New York" in the State of New York.

This uniformity of name of the three companies was considered essential, as it was intended to work the entire line as one, in so far as it could be done by contracts, one with the other, as there was at the time no law in either of the respective states authorizing a legal consolidation.

Each company made contracts for the building of their respective roads: the companies in New York and Pennsylvania with Doolittle and Streator, and the company in Ohio with Henry Doolittle, gentlemen of indomitable energy and business tact.

The history, thus far, of this line of road has been hastily sketched, with a view to make clear to the interested reader *how* the present great line of railway became a reality.

Negotiations were commenced in Europe, in the fall of 1858, with James McHenry, Esq., for the necessary means to carry on the work. In the fall of that year, at the instance of Mr. McHenry, T. W. Kennard, Esq., a civil engineer of prominence in England, came out to make an exploration of the entire line. He performed his work most thoroughly; and,

upon the receipt of his report by Mr. McHenry, preparations were made for actively commencing operations. Mr. Kennard came out as the agent and attorney of Mr. McHenry, and also as engineer-in-chief of the whole work.

On the 20th day of April, 1860, a corps of engineers commenced their labors at Jamestown, N. Y., and on the 26th day of the same month a second corps commenced at the junction with the New York and Erie Railroad at Salamanca. On the 27th the contractors commenced grading, and May 8, 1860, the first rail was laid, and the first spike driven. During the same month a construction train was put on the work, and on July 3d, of the same year, 17 miles of track was laid to Randolph, N. Y. On the 25th day of August following, the track was laid across Main Street, in the village of Jamestown, N. Y., 34 miles from Salamanca; and in the afternoon of that day an excursion train arrived from the city of New York, containing the chief officers of the New York and Erie Railroad Company, and other gentlemen. In May, 1861, another link was opened, from Jamestown, N. Y., to Corry, Pa., a distance of 27 miles from the former place, and 61 miles from Salamanca. On the 27th day of the same month regular trains commenced running over this portion of the road.

In 1861 the contracts for the completion of the entire line passed into the hands of Mr. McHenry; but the work was suspended from June 1st, 1861, to March 13th, 1862, when the engineers were again placed upon the line in Pennsylvania. The construction was now driven forward with energy under the immediate supervision of Mr. Kennard. On the 21st day of October, 1862, the road was opened to Meadville, Pa., 41 miles distant from Corry, and 102 miles from Salamanca.

During this time the work was progressing in Ohio, not very rapidly, however; but in the spring of 1862 it was energetically commenced.

January 4th, 1863, another section of the road was opened, from Meadville, Pa., to Warren, O., 59 miles from the former place, and 161 miles from Salamanca.

February 23d following, the track-laying was completed to Ravenna, and on the 18th of May express trains commenced running regularly to this point; and, eight days subsequently, the broad-gauge cars reached Akron, 202 miles from Salamanca.

On the 30th of this same month the track-layers completed the track on the Franklin Branch (Meadville to Franklin, Pa.), 25 miles.

The work accomplished during the year, so briefly referred to, is without parallel in the history of railroads. When we consider the great scarcity of laborers, the army absorbing able-bodied men to the extent that it became necessary to keep agents in Canada and Ireland to send them out for this particular work by the ship-load, the building and bringing into active operation so many miles of road in so short

a period of time may well be called a wonderful achievement.

Although we have now reached Akron, the work does not lag, but is being carried on with the same resistless energy that characterizes all the movements of this young, but powerful and influential corporation.

We find that, in the month of October, 1863, this company (we speak of these three companies as *one*, because they are one in interest, and are working in harmony, with but one object in view) leased for 99 years the Cleveland and Mahoning Railroad, extending from Cleveland southerly to Youngstown, O., 67 miles. This road has a narrow-gauge track crossing the Atlantic and Great Western Railroad at Leavittsburg, O., a point 50 miles south of Cleveland. The Atlantic and Great Western Railroad Company laid a rail on either side of the narrow track, thus carrying the broad-gauge into the Forest City, and enabling them to announce, on the 3d of November, 1863, the arrival of a broad-gauge train from the city of New York.

On the 27th of December of this year the last rail between Akron and Galion was spiked, 82 miles of additional road being thereby brought into use.

In June, 1864, a special train reached Dayton, and a connection was made with the Ohio and Mississippi Railroad at Cincinnati, over the broad-gauge track of the Cincinnati, Hamilton, and Dayton Railroad, from Dayton to Cincinnati, which had been provided by that company for the business of the Atlantic and Great Western Railway.

In August of the same year, a train was run from New York to St. Louis, 1200 miles of broad gauge, in 47 hours.

Work on this great line was commenced about May 1st, 1860. In June, 1864, the track was completed to Dayton, 388 miles; also from Leavittsburg to Cleveland, 50 miles; and from Meadville to Franklin, 25 miles. From June, 1861, to April, 1862, work was suspended; therefore we have 463 miles of road built and brought into active operation in a period of about 38 months.

The entire main line of the three companies is as follows:

Main line of the Atlantic and Great Western Ry. Co. in N.Y. : Salamanca to the N.Y. and Pa. state line	49 miles
Main line of the Atlantic and Great Western Ry. Co. of Pa. : N.Y. and Pa. state line to Pa. and Ohio state line	92 "
Main line of the Atlantic and Great Western Ry. Co. Ohio: Ohio and Pa. state line to Dayton.....	247 "
Total main line.....	388 miles

In addition to the above main line in the three states of New York, Pennsylvania, and Ohio, we have the following branches:

Franklin Branch, from Meadville to Oil City, Pa.....	32 miles
Mahoning and Cleveland Branches, the Cleveland and Mahoning Railroad leased for 99 years, viz. : Cleveland Branch, from Leavittsburg to Cleveland, Ohio.....	50 "
Mahoning Branch, from Leavittsburg to Youngstown, Ohio	17 "
Hubbard Branch, being a branch of the above Cleveland and Mahoning Railroad, from Youngstown to Coal Mines, Ohio.....	14 "
Silver Creek Branch, from near Wadsworth to Coal Mines, Ohio...	6 "
Total miles of branches	119
" main line.....	388
Total miles operated	507

In August, 1865, the companies of the three roads were consolidated, under the provisions of Acts of Consolidation passed by the respective Legislatures of the three states of New York, Pennsylvania, and Ohio. Included in the consolidation is a branch road, heretofore known as "The Buffalo Extension of the Atlantic and Great Western Railway Company," leaving the main line of the consolidated roads at Randolph, New York, 17 miles west of Salamanca, and extending to Buffalo, a distance of about 67 miles. This branch will be completed in 1866, and will form a connection with the Erie and Niagara Railroad in Canada, crossing the Niagara River near Buffalo. [The foregoing history of the Atlantic and Great Western Railway was prepared by J. C. Calhoun, auditor of the company, who has been connected with it for many years.]

Thus it will be seen, from these two or three local projects, there has been developed one of the most extensive and successful railways on this continent. When James McHenry, with rare foresight and remarkable financial ability, entered fully upon the work, it was carried forward with irresistible energy. The fact soon became apparent that some of the wealthiest men in England, with James McHenry at the head, were constructing an independent line, to connect all the principal cities of the sea-board with the great West, thus affording greater facilities to the manufacturer and producer for exchanging their commodities, and eventually cheapening rates for travel and freight. Measures were at once adopted by other railway companies to compete, if possible, with this great line, which day by day developed itself with astonishing rapidity. New union dépôts were projected; new cars, with all the modern improvements, ordered; eating-houses remodeled, and more time allowed for meals; better connections made, and, wherever practicable, cars run over connecting roads, thus striving to retain a portion of the through traffic which they foresaw must inevitably be diverted to the Atlantic and Great Western Railway. Though nearly 600 miles of road are now operated by the company,

the work of construction still goes steadily forward. Railroads that were heretofore considered merely local enterprises have been leased for a long term of years, others bought outright, and will, as soon as practicable, be connected with the main line. When the projected connections are all made—when, as contemplated, the Atlantic and Great Western has a terminus in Boston, Philadelphia, St. Louis, and Chicago, as well as New York—then that time will have arrived when rates for both passengers and freight will be cheapened to such an extent that its beneficial effects will be felt in the remotest sections of our country.

As previously stated, Mr. McHenry put the entire supervision of the construction of the Atlantic and Great Western Railway into the hands of T. W. Kennard, Esq., who entered into the work with characteristic earnestness and vigor. He so infused his own spirit and energy into his subordinates that the work progressed for months at the rate of a mile a day, through towns and villages, swamps and woods, through hills and over rivers, until the broad-gauge system was completed from the Atlantic Ocean to the Mississippi River. To accomplish this, he procured from Canada and Europe 15,000 men. Mr. Kennard has had charge of many important works in England and Spain; and, it is almost unnecessary to add, his reputation as a civil engineer is world-wide. He has built miles of iron bridges, including the celebrated Crumlin Viaduct in Wales, one third of a mile long and 200 feet high.

No new line ever built in the United States passes through more highly cultivated or better settled districts, which, from the very first, have thrown an immense amount of traffic upon the line. The passenger station at Cincinnati of the Cincinnati, Hamilton, and Dayton Railroad Company is one of the best and most convenient in the United States, containing arrangements for the comfort of our passengers not usually met with. At Meadville, the head-quarters of

the company, there is a very fine building, containing the offices for the various departments, refreshment rooms, and, in addition, a large, first-class hotel, admirably managed. There are at this place, built of brick, large workshops and engine-houses, which, with the houses belonging to the company and rented by employes, cover an area of sixty acres.

At the Kent Station there are also large works, consisting of car and smith shops and engine-houses, all built of stone in a most substantial manner. In addition, the Company have leased and enlarged the Jersey City Locomotive Works. This immense factory in Jersey City occupies two entire blocks, from Morgan to Washington Streets, and from Steuben to Bay Streets, and turns out complete eight locomotives of the largest size per month, and also furnishes the iron work for cars, both passenger and freight, for the equipment of the road.

Under the active presidency of S. S. L'Houmedieu, Esq., and the management of D. McLaren, Esq., the general superintendent, vast improvements are being made.

The country traversed by this road and its extensions, more than a thousand miles from New York to St. Louis, is equal in wealth, as well as in variety of scenery, to any portion of the American continent. Leaving New York City by the Erie Road, you pass through a beautiful and fruitful section of New Jersey, until that road strikes the Delaware River. It then follows the meanderings of that stream through charming and variegated scenery for a considerable distance, when it strikes across to the waters of the more beautiful and romantic Susquehanna. From thence the Erie Road proceeds in its westerly course through the southern tier of counties in New York, until at Salamanca, the Atlantic and Great Western strikes off in a southwesterly direction, passing through a portion of Southwestern New York, Northwestern Pennsylvania, and Central Ohio, to both Cincinnati and Cleveland.

STATIONS ON THE MAIN LINE OF THE ATLANTIC AND GREAT WESTERN RAILWAY.

CINCINNATI (Salamanca, 448 miles), connect with Ohio and Mississippi, Indianapolis and Cincinnati, and Kentucky Central Railroads; also with Louisville steamers—the western terminus of the Atlantic and Great Western, and Cincinnati, Hamilton, and Dayton Railway lines. The site of the city is peculiarly favorable to commerce. It is situated on the right bank of the Ohio River, 455 miles below Pittsburgh, and 1548 above New Orleans. It is near the eastern extremity of a valley about 12 miles in circumference, surrounded by a series of hills, which rise to the height of 300 feet by gentle and varying slopes. The city is built on two table-lands, the one elevated from 40 to 60 feet above the other. Covington and Newport, opposite, in Kentucky, are connected with the city by means of a suspension bridge across the Ohio, the span of which is the longest in this country. The shore of the Ohio at the landing (an open area of about 10 acres) is substantially paved to low-water mark, and supplied with floating wharves. The city is laid out with great regularity, the streets well paved, is compactly and well built, and a very large number of the buildings are of a beautiful gray sandstone. The climate is more variable than on the Atlantic coast in the same latitude, snow rarely falling sufficiently deep to furnish sleighing, and navigation is seldom suspended in winter. Few places are more healthy, and no other large city of the United States affords such a variety of position and scenery. It is the county seat of Hamilton county, and has about 220,000 inhabitants. The city is supplied with water raised from the Ohio River by steam-power. The raw material and facilities for manufacturing are very abundant, and almost unequalled. Above, on the Ohio River, are inexhaustible beds of iron, coal, and salt. The manufactures of the city, already enormous, are constantly increasing. In the curing of meats (especially the product of the hog) Cincinnati has long been famous. The pork, bacon, lard, lard-oil, star candles, soap, bristles, etc., amount in value to 11 millions annually. The manufacture of iron, in all its branches, amounts to about 6 millions; clothing, 10 millions; furniture, 4 millions; domestic liquors, 9 millions. The Cincinnati Observatory, Court-house, City Hall, Merchants' Exchange, Pike's Opera-house, Masonic Temple, Catholic Cathedral, etc., deserve especial mention. There are over one hundred churches, and many literary and charitable institutions; eight or ten daily newspapers, and a large number of weekly and monthly publications.

Wine from the Catawba grape is extensively made from the produce of the extensive vineyards in the vicinity of Cincinnati. In 1779

there were three small settlements on the Ohio, between the Miami Rivers—Columbia, at the mouth of the Little Miami; Cincinnati, opposite the mouth of the Licking; and Symmes, or North Bend (since famous as the residence of President Harrison). To protect these settlements from the incursions of the Indians, it became necessary for the government to establish a military post at one of the three points. The officer in command selected North Bend, and was completing his arrangements to build a fort and block-house, when he suddenly reversed his decision. The story goes that he formed the acquaintance of a beautiful woman, the wife of one of the settlers, and that the husband, not liking his frequent visits, suddenly removed his family to Cincinnati. The officer at once decided that North Bend was not an advantageous position for a military post; that the proper point was Cincinnati, and built the fort there. This soon became the head-quarters and dépôt of the army, and settled the location of "the Queen City of the West."

HAMILTON (Cincinnati, 25 miles; Salamanca, 423 miles), connect with Cincinnati, Eaton, and Richmond, and Cincinnati and Indianapolis Junction Railroads—is a prosperous manufacturing city, situated on the site of Fort Hamilton, on the left bank of the Great Miami River, and is abundantly supplied with motive power by a canal diverting the water from the river four miles above. There are numerous cotton and woolen factories, paper-mills, iron foundries, machine shops, etc. It has about 25,000 inhabitants, and is the county seat of Butler county. One John Cleve Symmes, who lived and died in Hamilton, achieved some notoriety by advancing and advocating a theory that the earth is hollow, habitable within, and widely open about the poles. He petitioned Congress and the State Legislature to fit out an expedition to explore, etc., etc. The county has a population of about 48,000. An excellent species of limestone for building purposes underlies the county. A number of interesting monuments of the aboriginal inhabitants have been discovered in this region.

DAYTON (Cincinnati, 60 miles; Salamanca, 388 miles), connect with Dayton and Western, Dayton and Michigan, Dayton and Union, Xenia and Belpre, and Sandusky, Dayton, and Cincinnati railroads—is situated on the Great Miami River, immediately below the entrance of Mad River, and is built upon a plain, with the streets crossing each other at right angles, and a public square in the centre. It is a place of great industrial activity and wealth, the county seat of Montgomery county, and has 40,000 inhabitants. The county court-house is an imposing structure, built of white marble quarried

in the neighborhood. A large and elegant Opera-house has recently been completed. There is an immense water-power within the city limits, a great part of which is obtained from a hydraulic canal. Flour, oil, and paper mills, cotton and woolen factories, iron foundries, machine shops, breweries, manufactories of agricultural implements, railroad cars, gun barrels, pegs and lasts, hollow-ware, etc., are here in profusion. About 10 miles south of Dayton, on an elevation some 100 feet above the Miami River, is an ancient work, or fortification, 800 feet around the base, and 67 feet high—the largest artificial mound, with one exception, yet discovered in the country.

KNEISLEY'S (Cincinnati, 67 miles; Salamanca, 381 miles). A short distance from this station is a large mill (capacity 100 barrels of flour per day) and an extensive distillery, making this point a great grain dépôt for the surrounding country. In Montgomery county.

OSBORN (Cincinnati, 70 miles; Salamanca, 378 miles). The first and last station in Greene county, and has 1200 inhabitants. The celebrated Yellow Springs, which possess medicinal qualities equal to any in the country, are located in this county, nine miles north of Xenia. The spring originates in a limestone rock, and produces some 110 gallons of water per minute.

EXON (Cincinnati, 76 miles; Salamanca, 372 miles). The town is one mile from the station, and has about 1000 inhabitants. In Clarke county.

SNYDER'S (Cincinnati, 78 miles; Salamanca, 370 miles). This is also in Clarke county, which has a population of 35,000. The soil is very fertile, well watered by springs, and is well cultivated.

SPRINGFIELD (Cincinnati, 82 miles; Salamanca, 366 miles) is the centre of a rich and populous agricultural region. There are numerous large flouring-mills in and around the city, iron foundries, machine shops, linseed-oil mills, woolen factory, paper-mill, etc. Limestone is largely quarried and burned, producing lime of excellent quality. Wittenberg College was founded here in 1842 under the direction of the Christians; it has a flourishing theological department. A heavy trade is carried on in wheat, flour, Indian corn, and other produce; and large numbers of cattle and swine are exported to Eastern markets. It is the county seat of Clarke county, and is situated on the east fork of Mad River, which affords extensive water-power. The station is one mile and a half from the town. Tecumseh was born in this county, near Springfield.

TREMONT (Cincinnati, 88 miles; Salamanca, 360 miles), a small place in Clarke county with about 300 inhabitants. From Dayton to this station the road runs near Mad River, and through a valley not excelled for fertility and agricultural resources by any portion of the West.

HUNT'S (Cincinnati, 90 miles; Salamanca, 358 miles)—in Clarke county.

LAWRENCE (Cincinnati, 92 miles; Salamanca, 356 miles)—in Clarke county.

URBANA (Cincinnati, 95 miles; Salamanca, 353 miles), connect with Columbus and Indianapolis, and Sandusky, Dayton, and Cincinnati Railroads. To this point from Dayton the line runs alongside the Sandusky, Dayton, and Cincinnati Railroad, and here intersects the road from Indianapolis to Columbus. Urbana is the county seat of Champaign county, and has about 8000 inhabitants. It is finely situated, well built, and is the seat of Urbana University. The Urbana Collegiate Institute (a female seminary), under the charge of the United Presbyterian Church, is also located here. Population of county about 25,000.

TAYLORSTOWN (Cincinnati, 99 miles; Salamanca, 349 miles), small village, near the station, of 300 inhabitants. In Champaign county.

MINGO STATION (Cincinnati, 105 miles; Salamanca, 343 miles)—in Champaign county.

NORTH LEWISBURG (Cincinnati, 109 miles; Salamanca, 339 miles). This is a small village of 1000 inhabitants, and is the last station, going east, in Champaign county. Bellefontaine, East Liberty, Woodstock, Middlebury, Maysville, Middletown, Pickertown, and Lanesfield, all populous towns, are in the neighborhood of this station.

NEWTON (Cincinnati, 120 miles; Salamanca, 328 miles), a considerable dépôt for the lumber and other products of Union county.

RICHWOOD (Cincinnati, 129 miles; Salamanca, 319 miles), a thriving town in Union county, with about 1000 inhabitants. Several small towns and villages are in the immediate vicinity, and tributary to this station. Population of county, 17,000.

BERWICK (Cincinnati, 138 miles; Salamanca, 310 miles), the first station in Marion county going east, and has 700 inhabitants. From North Lewisburg to this place the country is new and thinly settled.

MARION (Cincinnati, 143 miles; Salamanca, 305 miles), the county seat of Marion county, is an enterprising business place, having 4000 inhabitants. Population of county, 16,000. From Marion to Galion, a distance of 21 miles, run side by side with Bellefontaine Railroad.

CALEDONIA (Cincinnati, 153 miles; Salamanca, 295 miles) is finely situated on the west branch of the Whetstone River, in Marion county, and has a large and flourishing business with the surrounding country, there being several mills in the neighborhood.

GALION (Cincinnati, 164 miles; Salamanca, 284 miles), connect with the Bellefontaine, and Cleveland, Columbus, and Cincinnati Railroads—in Crawford county; is the eastern terminus of the Bellefontaine Railroad, and has some 3000 inhabitants. Enormous beds of peat are found in this county, one of which, in Cranberry township, called Cranberry Marsh, containing 2000 acres, is estimated to contain 2,500,000 cords. This marsh formerly produced thousands of bushels of cranberries. There are sulphur springs near Bucyrus, the county seat, which are resorted to by invalids;

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and, in the town, a curious well, from which gas is conducted to the surface by pipes, and burns brilliantly. Population of county, 24,000.

ONTARIO (Cincinnati, 172 miles; Salamanca, 276 miles), a small village of about 500 inhabitants, and the first station in Richland county going east.

MANSFIELD (Cincinnati, 179 miles; Salamanca, 269 miles), connect with the Pittsburg, Fort Wayne, and Chicago, and Sandusky, Mansfield, and Newark Railroads—is pleasantly situated on elevated ground, is the county seat of Richland county, and has a population of from 5000 to 10,000. Mansfield was named after its original settler, Col. Jared Mansfield, a gentleman distinguished for extraordinary mathematical talents, and Surveyor General of the United States for the Northwestern Territories under President Jefferson. This county is noted for fine horses and neat cattle; has a population of 31,000. At this point the Atlantic and Great Western, and Pittsburg, Fort Wayne, and Chicago companies have agreed to erect union dépôts.

WINDSOR (Cincinnati, 187 miles; Salamanca, 261 miles)—small place; population, 300. Olivesburg and Mifflin are near this station.

ASHLAND (Cincinnati, 196 miles; Salamanca, 252 miles), formerly called Uniontown, but changed its name in compliment to Henry Clay, is the county seat of Ashland county, and has about 3000 inhabitants. It is beautifully situated on a ridge between the Lake Fork and Black Fork of the Mohican River. This county is famous for its wheat, and has a population of 24,000. Hayesville, Jeromesville, Orange, and Savannah are near and tributary to this station.

POLK (Cincinnati, 203 miles; Salamanca, 245 miles), a dépôt for the towns of Troy and Rousburg, in Ashland county.

WEST SALEM (Cincinnati, 210 miles; Salamanca, 238 miles) is a thriving little town in Wayne county, with about 1000 inhabitants, and is the centre of a great butter region. Wayne county was established in 1796, and was the third county formed in the Northwestern Territory. Its original limits were very extensive, embracing what is now a part of Ohio, Indiana, Illinois, Wisconsin, and all of Michigan. Ohio, with a considerable part of the neighboring region, was comprised in a territorial government established by the United States in 1781, under the name of the "Territory northwest of the Ohio." Population of county, 32,500. Wooster is the county seat. Coal abounds in the northwestern part. Perrysburg, Converse, and Homer are tributary to this station.

BRIDGEPORT (Cincinnati, 216 miles; Salamanca, 232 miles) is a small village in Wayne county, having 800 inhabitants. Several large towns are in the immediate vicinity.

SEVILLE (Cincinnati, 222 miles; Salamanca, 226 miles), a growing place, has already some 12,00 inhabitants, and is in Medina county. Medina was originally named Mecca,

the birth-place of Mohammed; then changed to Medina, his burial-place. There are but six other Medinas in the world: one in Arabia, one in Africa, one on an island in the Persian Gulf, one in Spain, one in New York, and one in Michigan. Population of county, 22,500. Medina is the county seat.

WADSWORTH (Cincinnati, 232 miles; Salamanca, 216 miles), junction of Silver Creek Branch. Diverging from Wadsworth is the Silver Creek Branch of the Atlantic and Great Western, a coal road six miles long, being the first coal-field reached on the line going east. It is expected to supply the towns on the line south with the coal, which is of the celebrated Chippewa variety. This village has some 500 inhabitants, and is in Medina county. Sharon, Western Star, River Styx, Doylestown, and Clinton are thriving towns near this station. Population of county, 22,500.

NEW PORTAGE (Cincinnati, 240 miles; Salamanca, 208 miles). There are large earthenware works in this place. It has some 500 inhabitants, and is in Summit county. Immense beds of bituminous coal are found in this county; also fine clay, from which a superior quality of stoneware is manufactured. The towns near this station, and tributary to it, are Richfield, with a population of 2000; Hinckley, 1000; Brunswick, 1000; Liverpool, 3000; Strongsville, 2500; Albion, and Yellow Creek.

AKRON (Cincinnati, 246 miles; Salamanca, 202 miles), connect with Cleveland, Zanesville, and Cincinnati Railroad—the county seat of Summit county, and has about 10,000 inhabitants. The Ohio and Erie and the Ohio and Pennsylvania Canals connect at this point. By a succession of locks at Akron, the Ohio and Erie Canal rises suddenly to the Portage Summit, and presents many picturesque views. An immense water-power is here produced by means of the Little Cuyahoga River and the waste water of the canal, which has been extensively employed for milling purposes, making it the most important flour-milling point in the state, the capacity of the mills being 1500 barrels per day. There are four woolen factories, five large flour-mills, a steam-engine factory, a blast furnace, a mineral paint-mill, a card manufactory, and extensive manufactories for agricultural implements, stoves, etc. The town is 400 feet above the lake, being the most elevated ground on the line of the canal between Lake Erie and the Ohio River. In the vicinity of the town immense beds of mineral paint are found, and exported to every part of the country.

TALLMADGE (Cincinnati, 250 miles; Salamanca, 198 miles)—the last station in Summit county going east, and has about 500 inhabitants. There is a bed of excellent bituminous coal here, which is extensively mined. Two miles distant is the pleasant village of Cuyahoga Falls, where the Cuyahoga River passes through a deep channel in the rocks, and by successive leaps falls 240 feet, creating an immense water-power.

KENT (Cincinnati, 256 miles; Salamanca, 192 miles), formerly called Franklin Mills, is situated on the Cuyahoga River, which has here a series of falls, creating a great water-power. About two miles from the town is a beautiful sheet of water, known as Brady's Pond, the shores of which are composed of a white sand, adapted to the manufacture of glass. Near this spot the Cuyahoga River is compressed into a narrow, rocky channel, 50 feet deep and 20 across, called Brady's Leap—both deriving their names from an incident in the life of a noted Indian fighter named Brady. In escaping from the Indians, Brady jumped this chasm, and successfully eluded pursuit by secreting himself in the pond. Extensive work-shops have been erected by the Company at this point. The buildings are of white sandstone found on the spot, and are substantial and handsome. There are two flouring-mills, one large cotton factory, two woolen factories, and four churches here. Kent has at present about 1500 inhabitants, and bids fair to be an important town. It is the home of Marvin Kent, Esq., first President of the Atlantic and Great Western Company in Ohio.

RAVENNA (Cincinnati, 263 miles; Salamanca, 185 miles), connect with the Cleveland and Pittsburg Railroad—the county seat of Portage county. It is pleasantly situated on a plain near the branch of the Cuyahoga River, and has about 5000 inhabitants. The Pennsylvania and Ohio Canal passes through the south part of the village, and affords water-power. Rootstown, Randolph, Campbellsford, Streatsburg, Shalersville, and Nelson are all within a short distance of this station.

FREEDOM (Cincinnati, 269 miles; Salamanca, 179 miles), small town in Portage county, but country in the vicinity is densely populated.

WINDHAM (Cincinnati, 274 miles; Salamanca, 174 miles). This is a flourishing agricultural town in Portage county, with some 1000 or 1200 inhabitants. Its name was changed from Sharon in 1820. All this region is a fine grazing country, and some of the small towns furnish 1000 tons of cheese and butter per annum.

BRACEVILLE (Cincinnati, 279 miles; Salamanca, 169 miles), in Trumbull county, between the main line and Cleveland Branch, and has some 1500 inhabitants. There are fine dairy farms in this vicinity. Sellington, Farmington, Mesopotamia, Newton Falls, Lordstown, Paris, and Windsor are tributary to this station.

LEAVITTSBURG (Cincinnati, 283 miles; Salamanca, 165 miles), junction of Cleveland Branch and Mahoning Branch with main line—an important transfer point; in Trumbull county. This county originally comprised within its limits the whole of the tract known as the Western Reserve, and was named in honor of Governor Trumbull, of Connecticut. By virtue of her charter, Connecticut claimed part of the territory of Pennsylvania and Ohio; the former she relinquished, the latter was adjusted by her receiving a tract in Ohio, which was called the

Western Reserve. This lay along the southern shore of Lake Erie. In 1795 it was sold by Connecticut, and the money received became the foundation of her school fund. The early records of the counties on the Reserve are copied from the records of this county. The Pennsylvania and Ohio Canal, here called the Mahoning Canal, passes through the county. Cattle, butter, cheese, and grain are largely exported. Warren, county seat. Population, 30,000.

WARREN (Cincinnati, 286 miles; Salamanca, 162 miles) is situated on the Mahoning River, and has about 4000 inhabitants. It is the county seat of Trumbull county. The town plat is one mile square, with streets crossing each other at right angles. The Mahoning River furnishes a fine water-power, and is extensively used for manufacturing purposes.

BACONSBERG (Cincinnati, 294 miles; Salamanca, 154 miles). This is called the Mecca oil region, and produces valuable oil in moderate quantities. It is in Trumbull county, and has about 500 inhabitants. Mecca, Johnson's, Gustavus, and Williamsfield are all within a few miles of this station.

JOHNSON'S SUMMIT (Cincinnati, 299 miles; Salamanca, 149 miles). Large dairy farms are along the line of the road between this station and Akron, and the shipments of butter and cheese vary from 500 to 1200 tons per annum from each station. In Trumbull county.

BURGHILL (Cincinnati, 304 miles; Salamanca, 144 miles), in Trumbull county, and the last station, going east, in the State of Ohio.

ORANGEVILLE (Cincinnati, 306 miles; Salamanca, 142 miles), a place of considerable activity, and has some 1200 inhabitants. Within a radius of five or ten miles are the towns of Sharon, Hartford, Vernon, Kinsman, Maysville, and Sharpsville. In Mercer county, Pennsylvania.

CRAWFORD'S (Cincinnati, 309 miles; Salamanca, 139 miles)—large coal-fields at this point.

CLARKSVILLE (Cincinnati, 311 miles; Salamanca, 137 miles), connect with Erie and Pittsburg Railroad. The Erie and Pittsburg Road runs parallel with the Atlantic and Great Western track 8 miles, and at this point the two companies have constructed a commodious transfer station, which has given the town a sudden impetus; it already numbers some 1000 inhabitants, and is growing rapidly. As there are some 10 towns, with populations of from 2000 to 3500, tributary to this station, it will doubtless be a very important place. In Mercer county. Population of county, 36,800. Extensive coal mines are found in this county; also iron and limestone. Iron foundries, woolen factories, tanneries, etc., abound here. The Beaver and Erie Canal intersects the county.

GREENVILLE (Cincinnati, 319 miles; Salamanca, 129 miles), a large and flourishing town in Mercer county of 4000 inhabitants. Several important towns are tributary to this station.

SUGAR GROVE (Cincinnati, 325 miles; Sala-

manca, 123 miles)—small station, in Mercer county.

ADAMSVILLE (Cincinnati, 325 miles; Salamanca, 121 miles), a village of about 500 inhabitants, and the first station, going east, in Crawford county.

EVANSBURG (Cincinnati, 333 miles; Salamanca, 115 miles). Town of the same name 4 miles from station. Population, 800. In Crawford county. Population of county, 50,000. This county was named in honor of Colonel William Crawford, who was killed by the Indians at Sandusky in 1782. Lumber is abundant, and forms one of the chief articles of export. Iron ore and lime marl are found in considerable abundance. Enormous quantities of butter and cheese are manufactured in this county. There are 140 saw-mills, 15 flour-mills, 3 woolen factories, 2 iron foundries, 16 tanneries, and various other mills and factories.

SUTTON (Cincinnati, 338 miles; Salamanca, 110 miles), a considerable dépôt for the lumber and other products of Crawford county.

MEADVILLE (Cincinnati, 345 miles; Salamanca, 103 miles), connect with Franklin and Oil City branch of the Atlantic and Great Western for Franklin, Reno, Oil City, Pithole, and Petroleum City—the outlet of the great oil region of Pennsylvania. The general offices of the railway are at this place, and a large and admirably managed hotel, the McHenry House, where passengers dine, etc. Eight distinct table-d'hôte dinners are served here for the convenience of persons living in the house and passengers arriving by the trains. Meadville is the county seat of Crawford county, and is one of the oldest as well as wealthiest towns west of the Alleghanies with the exception of Pittsburgh, and has some 12,000 inhabitants. It lies on the left bank of French Creek. The town plat gradually rises from the river to its centre, where is a handsome public square of five acres, on the east side of which is an elegant courthouse. It has an old-fashioned, sturdy, solid air about it, and has always been a place of importance as the centre of a large and fertile grain and grazing district. It has 8 or 10 churches, half a dozen large hotels, an academy, state arsenal, paper-mill, etc., etc. It is the seat of Alleghany College, which was founded in 1816, and since 1833 has been under the direction of the Methodist Episcopal Church. The Western Theological Seminary, under the direction of the Unitarians, founded in 1844, is located here. In 1753, Governor Dinwiddie, of Virginia, sent George Washington on a special mission to the French fort on Venango River (now French Creek) to protest against the cruelties the French and Indians practiced on the settlers from Virginia in this section of country. Washington and his companion suffered incredible hardships, narrowly escaping drowning in the Alleghany River, freezing to death, and being scalped by the treacherous Indians. Washington's journal of this expedition was sent by Governor Dinwiddie to England, and there pub-

lished. The officer in command of the French fort on Venango River gave a glowing account, in a letter to General Montcalm, of a solemn gathering of the Indians in this region. After the great chief had recited the conquests and heroism of his ancestors, a torch was applied to the oil on the river, and as the flames burst forth the Indians gave triumphant shouts. Here was perpetuated the ancient fire-worship of the East, and these worshippers the children of the Sun. The word Venango is a corruption of the Indian word Qu-nun-gah, which had some reference to a figure carved upon a tree, which the Senecas found here when they first came to this region. In Meadville are erected, and in course of construction, the principal work-shops of the Company, and a large number of dwellings for the operatives. The Company have secured at this point a large quantity of land.

SAEGERTOWN (Cincinnati, 351 miles; Salamanca, 97 miles), a small station in Crawford county of about 500 inhabitants. From this station to Salamanca there is much forest land, and the resources of the country are but partially developed.

VENANGO (Cincinnati, 356 miles; Salamanca, 92 miles), quite a thriving town, with a population of 1200, in Crawford county. Eight miles from the station is the large town of Rockville.

CAMBRIDGE (Cincinnati, 360 miles; Salamanca, 88 miles), a place of considerable importance in Crawford county, with 2000 inhabitants.

MILLER'S (Cincinnati, 363 miles; Salamanca, 85 miles). The last station, going east, in Crawford county.

MILL VILLAGE (Cincinnati, 369 miles; Salamanca, 79 miles), in Erie county. The Philadelphia and Erie road runs directly alongside the Atlantic and Great Western from this station to Corry.

UNION (Cincinnati, 376 miles; Salamanca, 72 miles), in Erie county.

CONCORD (Cincinnati, 382 miles; Salamanca, 66 miles), a small village in Erie county. This county forms the northwestern extremity of Pennsylvania, bordering on New York, Ohio, and Lake Erie. Population, 54,000. Grain, maple-sugar, lumber, and dairy products are the staples. Iron is the principal mineral; slate and sandstone underlie much of the surface.

CORRY (Cincinnati, 387 miles; Salamanca, 61 miles), connect with the Philadelphia and Erie and Oil Creek Railroads—an important point for forwarding oil, and receiving merchandise and machinery for the oil regions. Here are the Downer Oil Refinery Works, containing iron tanks which hold 10,000 barrels of oil. In 1860 the site of Corry was a forest, not a house to be seen. Now there are three churches, a number of hotels, and 4000 inhabitants. In Erie county.

COLUMBUS (Cincinnati, 390 miles; Salamanca, 58 miles) has some 800 inhabitants, and is the first station going east in Warren county,

which forms part of the great oil region of Pennsylvania. There are large forests of excellent timber in this county.

PINE VALLEY (Cincinnati, 395 miles; Salamanca, 53 miles), in Warren county.

BEAR LAKE (Cincinnati, 398 miles; Salamanca, 50 miles). The last station going east in Pennsylvania.

PANAMA (Cincinnati, 400 miles; Salamanca, 48 miles), in Chautauqua county, New York. Town of same name distant 2 miles. Population, 1200.

ASHVILLE (Cincinnati, 407 miles; Salamanca, 41 miles). Quite an enterprising town, in Chautauqua county, now numbering 1000 or 1200 inhabitants.

JAMESTOWN (Cincinnati, 414 miles; Salamanca, 34 miles), connect with steamer on Chautauqua Lake for Maysville and points on the Lake shore—an important manufacturing and shipping point; is situated on the north side of the outlet of Chautauqua Lake, in Chautauqua county, and has some 5000 inhabitants. Chautauqua Lake is a beautiful sheet of water, 25 miles long, and from one to five miles wide. It is said to be the highest navigable water on the continent, being 1290 feet above the Atlantic and 730 feet above Lake Erie. Its outlet, which is navigable by small boats, opens into Alleghany River—called the Ohio by the Indians. The name Chautauqua is a corruption of an Indian phrase signifying a “foggy place,” and was given in consequence of the mists which frequently rise from the surface of the lake. There is a pleasant route to the Lake Shore Line at Westfield (57 miles east of Buffalo), *via* steam-boat on the Chautauqua Lake, from Jamestown to Maysville, 21 miles, and thence by coach, 7 miles, to the railway. This route is much frequented in the summer months. By means of Conewango Creek, which falls into the Alleghany, there is a boat navigation from the Gulf of Mexico to within 10 miles of Lake Erie. Population of county, 60,000. Iron ore, marble, also sulphur springs, have been found in

several places. There are springs emitting carbonated hydrogen, and the gas from one of these, near Fredonia, has been successfully employed in lighting the streets of the village, and for domestic purposes. Eleven large towns are tributary to the Jamestown station.

LEVANT (Cincinnati, 418 miles; Salamanca, 30 miles). In Chautauqua county.

POLAND (Cincinnati, 421 miles; Salamanca, 27 miles). In Chautauqua county.

KENNEDY (Cincinnati, 423 miles; Salamanca, 25 miles). A prosperous town in Chautauqua county of some 1200 inhabitants. The town of Ellington, with a population of 1200, is but a short distance from this station.

WATERBORO’ (Cincinnati, 425 miles; Salamanca, 23 miles), the last station, going east, in Chautauqua county.

RANDOLPH (Cincinnati, 430 miles; Salamanca, 18 miles). A branch of the Atlantic and Great Western is now being constructed from this point to Buffalo, and it is expected to be completed in 1866. Randolph has already about 1500 inhabitants, and is improving rapidly. In Cattaraugus county. Rutledge, with a population of 500, is near this station.

STEAMBURG (Cincinnati, 436 miles; Salamanca, 12 miles). In Cattaraugus county.

COLD SPRING (Cincinnati, 438 miles; Salamanca, 10 miles). In Cattaraugus county.

RED HOUSE (Cincinnati, 441 miles; Salamanca, 7 miles). In Cattaraugus county.

SALAMANCA (Cincinnati, 448 miles). Junction of the Erie Railway, connecting with trains east and west. In Cattaraugus county. Population of county, 50,000. Cattaraugus Creek and its tributaries flow north into Lake Erie, while the Alleghany River, with its tributaries in the south part, flow toward the Gulf of Mexico. Cattle and lumber are extensively exported. Peat, marl, bog-iron ore, manganese, also sulphur and saline springs, are found. The Genesee Valley Canal extends from Rochester to Olean. Petroleum springs exist in the east part of the county.

STATIONS ON THE CLEVELAND BRANCH OF THE ATLANTIC AND GREAT WESTERN RAILWAY.

CLEVELAND (Salamanca, 215 miles), connect with Cleveland and Toledo, and Cleveland, Columbus, and Cincinnati railroads, situated at the mouth of the Cuyahoga River, and the county seat of Cuyahoga county, has some 70,000 inhabitants. The portion of the city bordering immediately on the river is low, the greater part is built on a plain, elevated about 80 feet above the lake, of which it has a very commanding prospect. It is one of the most beautiful cities in the Union, and much taste is displayed in the private dwellings. The location is dry and healthy. Near the centre is a public square of 10 acres, inclosed and shaded with trees. The harbor of Cleveland is one of the best on Lake Erie. It is formed by the mouth of the Cuyahoga River and improved by a pier on each side, extending 425 yards into the lake, 200 feet apart, and faced with substantial stone masonry. The beacon on the pier is visible for a distance of $11\frac{1}{4}$ miles. The light-house at the entrance of the harbor shows a fixed light, elevated 150 feet above the surface of the lake, and is visible for a distance of $18\frac{1}{4}$ miles. Cleveland derives its name from General Moses Cleveland, an agent of the Connecticut Land Company, who accompanied the first surveying party upon the Western Reserve. The city plot was surveyed under his direction in 1796. The population in 1799 consisted of one family. The city is supplied with water raised from the lake by steam. The tonnage, ship-building, and foreign commerce of Cleveland have about doubled in the last seven years. The foreign commerce is mostly with Canada, to which is exported a large amount of the produce of Ohio; such as coal, flour, pork, lard, etc. Immediately south and east of Cleveland five counties yielded, in 1857, 20,000,000 bushels of coal. In one or two of these counties is also produced iron of the best varieties. These mines are being developed and furnaces erected. Churches and schools are numerous; and there are three daily newspapers. It is estimated that over a million passengers pass

through this place over the different railroads annually. The following railroads centre at this point: Cleveland and Toledo, Cleveland and Erie, Cleveland, Columbus, and Cincinnati, Atlantic and Great Western, and the Cleveland and Pittsburgh.

NEWBURG (Cleveland, 7 miles; Salamanca, 208 miles), situated on Mill Creek, in Cuyahoga county, where is a waterfall affording extensive water power. Cuyahoga county borders on Lake Erie, and is intersected by the Cuyahoga River, from which it derives its name. It rises in the central part of Geauga county, and runs south-westerly through Portage county, where it gradually turns and proceeds through Summit and Cuyahoga counties in a direction north by north-west to its entrance into Lake Erie at Cleveland. Its whole length is over 60 miles, and it is one of the most important rivers in Northern Ohio. It has a number of falls, which afford excellent mill seats, and it is less affected by drought in the summer than most other streams. The Ohio canal runs along the valley of this river about 35 miles, to near Akron, and crosses it in an aqueduct at Boston, 23 miles south of Cleveland. Sandstone is abundant in this county, and is much used for grindstones and for building.

PLANK ROAD (Cleveland, 12 miles; Salamanca, 203 miles), in Cuyahoga county.

OLON (Cleveland, 17 miles; Salamanca, 198 miles), in Cuyahoga county.

AURORA (Cleveland, 24 miles; Salamanca, 191 miles), population, 800; in Portage county.

MANTUA (Cleveland, 31 miles; Salamanca, 184 miles), in Portage county.

GARRETTSVILLE (Cleveland, 38 miles; Salamanca, 177 miles), in Portage county.

WINDHAM (Cleveland, 41 miles; Salamanca, 174 miles), in Portage county.

BRACEVILLE (Cleveland, 46 miles; Salamanca, 169 miles), in Trumbull county.

LEAVITTSBURG (Cleveland, 50 miles; Salamanca, 165 miles), connect with main line, and with the Mahoning branch.

STATIONS ON THE MAHONING BRANCH OF THE ATLANTIC AND GREAT WESTERN RAILWAY.

LEAVITTSBURG (Youngstown, 17 miles), connect with main line, and with Cleveland branch.

NILES (Leavittsburg, 8 miles; Youngstown, 9 miles), in Trumbull county.

GIRARD (Leavittsburg, 12 miles; Youngstown, 5 miles), in Trumbull county.

BRIER HILL (Leavittsburg, 14 miles; Youngstown, 3 miles), in Mahoning county.

YOUNGSTOWN (Leavittsburg, 17 miles), connect with stages for Newcastle, Poland, Lowell, Enon Valley, etc. A prosperous manufacturing town of 4000 inhabitants, situated in Mahoning county, and in the centre of the coal-fields of Ohio. Population of county, 26,000. Coal and iron are found in abundance. Here are large

iron-works, supplied, *via* the Cleveland branch, with ore from Lake Superior for smelting. Sharon, Newcastle, Lowell, and Mahoningtown are all manufacturing towns and tributary to Youngstown. Good coal banks underlie nearly all of this region. The Lawrence Railroad is now nearly completed, which will connect with the Cleveland Branch at Youngstown, thus furnishing a new and short route between Cleveland and Pittsburg, and with the Pittsburg and Connellsville and Metropolitan Branch of the Baltimore and Ohio road completed, will shorten the distance between Cleveland and Washington City 84 miles, compared with the present route by Harrisburg.

STATIONS ON THE FRANKLIN AND OIL CITY BRANCH OF THE ATLANTIC AND GREAT WESTERN RAILWAY.

MEADVILLE (Oil City, 35 miles).

MEADVILLE JUNCTION (Meadville, 3 miles; Oil City, 32 miles).

SHAW'S LANDING (Meadville, 6 miles; Oil City, 29 miles)

COCHRANTON (Meadville, 11 miles; Oil City, 24 miles).

UTICA (Meadville, 19 miles; Oil City, 16 miles), situate in Venango county. This county forms the centre of the great oil business of Pennsylvania. Population of county, 30,000. The surface is very hilly, a large part of the county being traversed by spurs of the Alleghany mountains. The soil along the streams is fertile. Iron ore and bituminous coal are very abundant, and there are traces of silver mines. It is drained by the Alleghany River, French Creek or Venango River, and Tionesta, Oil, Sugar, and Sandy creeks.

FRANKLIN (Meadville, 28 miles; Oil City, 7 miles), the county seat of Venango county, at the junction of French Creek and Alleghany River. Small steamboats run between Franklin and Pittsburg. Population, 5000. Franklin contains a court-house, an academy, two newspaper offices, two banks, and a private banking-house; a barrel factory turns out 250 barrels per day. There are two flouring mills, and several extensive machine shops. The town was laid out in 1795, on the site of Fort Franklin. The derricks of oil wells strike the eye at every turn. An incredible amount of business is transacted at the Register's office in this place, reaching one million of dollars per day in the transfer of leases alone.

RENO (Meadville, 33 miles; Oil City, 2 miles), connect with Reno, Oil Creek, and

Pithole Railroad. From its central location, and beautiful and healthy site, is regarded as one of the most inviting points for business or family residence to be found among the oil regions of Pennsylvania. It is situated in Venango county, on the Alleghany River, near the head of navigation. The railroad company has erected extensive warehouses at this point, which has given a great impetus to business of all descriptions. The Reno, Pithole, and Oil Creek Railroad affords ready means of communication with Pithole, Oil Creek, and Cherry Run, which greatly enhances the value of the place.

OIL CITY (Meadville, 35 miles), connect with Pithole and Oil City Railroad. In Venango county, and located on the Alleghany River, at mouth of Oil Creek, which rises in the north-western part of Pennsylvania. Oil Creek by name is as old as the Indian traditions extend, and derives its name from a spring from which large quantities of bituminous oil was obtained—the Indians valuing it highly. It is now claimed that when, by treaty, the Seneca nation sold the western part of the State they made a reservation around this spring of one mile square. For about a mile above Oil City, on the right hand side of the stream, the bank rises in an abrupt bluff, at the foot of which a very substantial road has been constructed. The city is built on the flats that run along the base of the high bluffs, and has but one street. Directly across the creek, on Cottage Hill, have been erected fine cottages. Population, 10,000. The Pithole and Oil City Railroad is now completed, and connects with the Atlantic and Great Western road at this point.

THE PETROLEUM REGION OF AMERICA.



STREET VIEW IN OIL CITY.

WHEN the treasures of California were discovered thousands rushed to its golden shores. The wilderness of the great West teemed with life, and the gulches were compelled to give up their treasures, long hidden from the eye of man. The American mines were no sooner opened than Australia was overrun with eager adventurers seeking for gold. Gold having been found in other parts of the world, skeptics on the subject have ceased to exist, and the golden mines of the eastern and western hemispheres have become realities.

But there is a mineral substance more precious

than silver or gold, the occurrence and profitable discovery of which geology alone is able to determine. That substance is coal. Yet when coal was discovered many predicted the almost immediate failure of the supply; but as civilization overspread the land, removing our forests of heavy timber, thus decreasing the supply of the only fuel we then had, Nature came to our assistance and disclosed to us the vast coal-fields hidden for so many ages beneath the earth. The coal "bubble" has never "burst." New fields are being discovered.

Seemingly not satisfied with the present de-

velopments of mineral wealth bestowed on us, Nature, keeping pace with the necessities of man, suddenly unfolds another wonder—*Oil, Petroleum*—which now comes spouting from the bowels of the earth, from inexhaustible basins hidden deep down amidst the sandstone rocks below.

Although Nature has selected the nineteenth century in which to develop her great resources in the article of petroleum, yet history informs us that the existence of "rock-oil" was known through many past ages. The walls of Babylon were built with brick, cemented with hot bitumen or asphaltum, which was found in Judea, afterward discovered in France, and in the sand rock of Albania. This asphaltum is black in color, brittle and solid, and when heated is reduced to a liquid state. It finds its way to the surface in the shape of a thick, waxy fluid, which was used for lubricating purposes, and for the calking of vessels. In the Birmese empire there is a mountain where over five hundred pits have been sunk for the collection of petroleum, which has long been used for burning purposes. It is also found on the shores of the Caspian, where it oozes through a soft soil in the form of vapor or gas, and is led through earthen pipes, and employed for illuminating the neighboring towns and cities. A very light liquid oil, resembling naphtha, is found coming from a spring near the village of Amiano, in the State of Parma, which supplies a sufficient quantity to illuminate the city of Genoa, for which purpose it is employed.

It is evident that the supply of whale-oil is fast decreasing, and that those mighty creatures of the deep have become so few that our once immense whale-fisheries threaten soon to be among the things that were. During the past ten or twenty years the demand for a burning oil has increased so rapidly that lard-oil and burning-fluid were introduced. But these, together with the sperm-oil, not only failed to supply the increased demand, but have gradually become almost extinct. It was at this point that there was disclosed to us, at our thresholds, a never-failing supply of burning oil.

The most celebrated oil-wells as yet discovered and operated on the American continent are located in the western part of Pennsylvania, principally in Venango, Crawford, and Warren counties. The wells next of note are found in Western Virginia and Eastern Ohio; and recently wells have been opened in the States of New York, Kentucky, Tennessee, and Michigan, also in Canada.

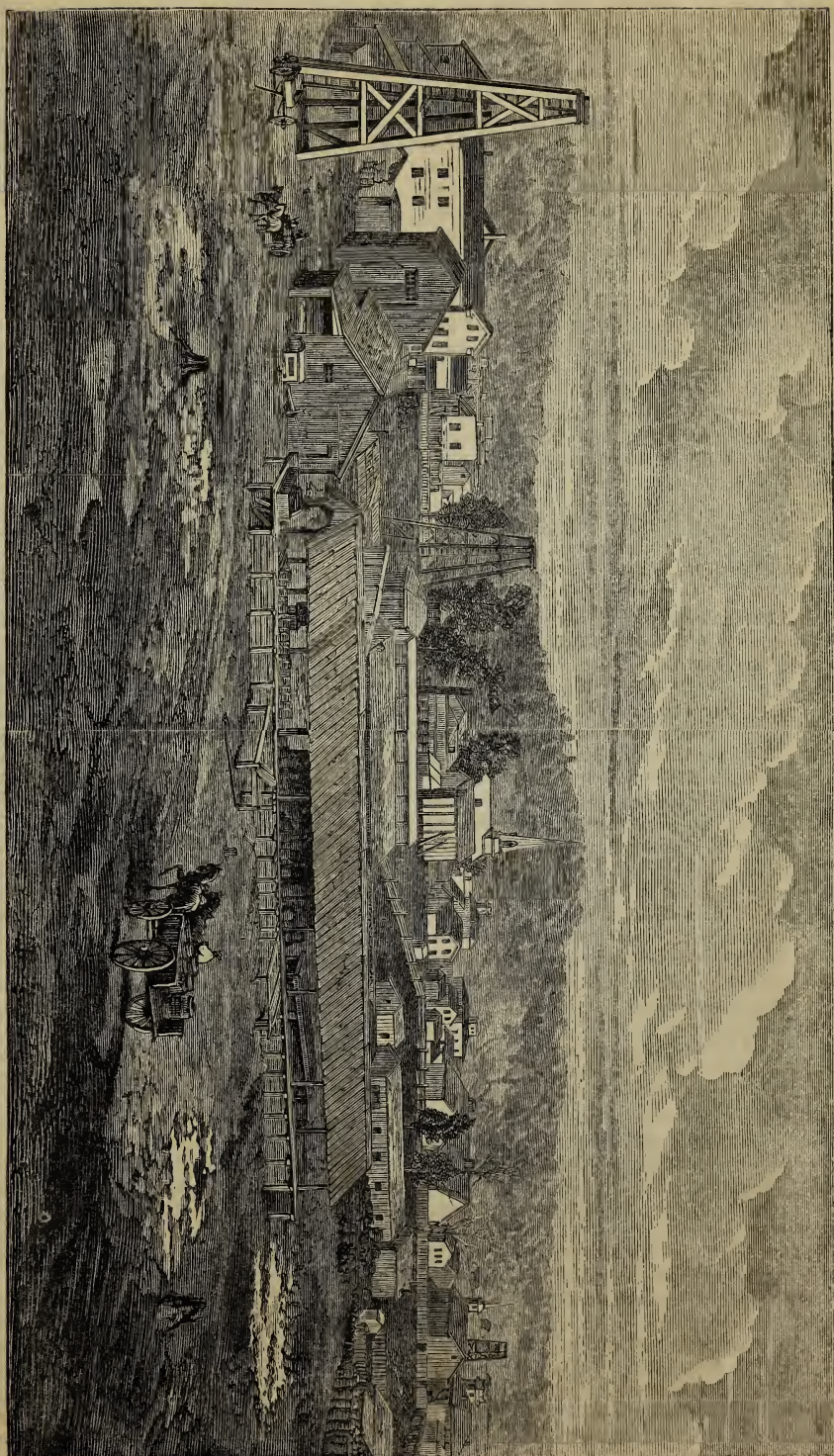
It has been said that petroleum is only found within a belt running diagonally across the globe, varying from six to sixty miles in width—sweeping across through the centre of the State of New York, passing over the western part of Pennsylvania and Virginia, and the eastern portion of Ohio and Kentucky, and so on down through the wilds of Tennessee. That there is such a belt of oil lands in existence, from the present developments, is not doubted; but the

assertion that no oil is found without the belt can not be sustained by facts, because the Canadian wells now flowing hundreds of barrels of oil are located on the borders of Lake Erie, far to the west of the so-called oil belt.

Oil Creek, which has become celebrated as the site of the richest oil-producing region on earth at the present day, is a tortuous mountain stream, taking its rise in the northern part of the State of Pennsylvania, near the south line of Erie County, and, with its tributaries, waters Crawford and Warren counties, and after a course of about thirty miles through these counties empties into the Alleghany River seven miles above the town of Franklin. The valley through which Oil Creek takes its course is narrow, and flanked on each side by high and rugged hills, on the top of which are broad fields of excellent farming land. The scenery on Oil Creek at one time, no doubt, was quite picturesque; but now the bottom lands are dotted with tall derricks, wooden engine-houses, and iron smoke-stacks, out of which columns of black smoke roll upward to the clouds. The pines and hemlock are cleared from the mountain sides, and all is busy life.

Previous to the developments of the petroleum discoveries this entire region supplied the valleys of the Ohio and Mississippi with vast quantities of lumber. Thousands of long rafts found their way out into the Ohio and Mississippi rivers during the spring and fall freshets. The extensive lumber saw-mills of Messrs. Brewer, Watson, and Co. were located on Oil Creek, near Titusville, the original metropolis of Petrolia. Near those mills oil first made its appearance in large quantities in this country. Half a mile below Titusville Oil Creek meets its principal confluent, Pine Creek, more commonly known now as the East Branch of Oil Creek; and the delta of these two streams is covered with old oil-pits, which occur at intervals all along the creek below Titusville. These pits are supposed by some to have been the work of the French during their occupancy of the country in 1759, on account of being located almost directly between the French forts of La Bœuf and Venango. The writer is inclined to believe that these pits were constructed by the Indians long before the appearance of the white man in this region; which belief is sustained by the following circumstance: In sinking a well recently in the neighborhood of Titusville, five feet beneath the spot where a tree had stood, which, calculating the layers of its yearly growth, must have been at least two hundred and forty years old, was found a wooden well curb, or mouth, of an old oil-pit in a good state of preservation.

The land of this entire region belonged to the "Holland Company," who obtained it in lieu of moneys lent to Congress during the Revolution. It was divided into four-hundred-acre lots, and sold at a very low price; but so many more attractions were held out to emigrants by the Western States at that time that this Venango region was almost overlooked, and it be-



PINEVILLE.

came settled very slowly. In the year 1797 Jonathan Titus and Samuel Kier arrived from the east and entered lands in this region. Mr. Titus secured a large tract of many hundred acres, part of which is now the site of Titusville and part the lands belonging to the "Titus Estate Petroleum Company" of New York. The Hon. John Reynolds, now of Meadville, with his father, shortly afterward settled at Cherry Tree, seven miles below; and not long afterward Hamilton and James M'Clintock settled on Oil Creek—the former at what is now Petroleum Centre, and the latter on the present site of M'Clintockville.

Petroleum, under the name of "Seneca oil"—so called from the tribe of Indians of that name who once inhabited the country—became early of great importance to the settlers, both as a medicine and for burning and lubricating purposes. The greater portion of oil was obtained from two natural springs. One of these was in the immediate neighborhood of Titusville, on the lands now owned by the "Watson Petroleum Company" of New York, on the spot where now stands the old "Drake Well." The other spring was on the farm of Hamilton M'Clintock, within four miles of the mouth of Oil Creek.

The old salt-wells situated on the Alleghany River, near the town of Tarentum, were owned by the father of Samuel M. Kier, now of the city of Pittsburgh. About two years after the opening of these salt-wells oil made its appearance upon the water that flowed into the salt-kettles, and interfered with the quality of the salt to such an extent that Mr. Kier at one time thought of abandoning his wells; but he afterward constructed a canal leading into the river, into which he passed the oil from the water. The oil on the water in the canal and river became very offensive to the people in the neighborhood, and many complaints were made. One day some boys, who were playing near the canal with matches, accidentally set the oil on fire, and it was with the greatest difficulty the village was saved from burning.

During the year 1853 Dr. F. B. Brewer, of the firm of Brewer, Watson, and Co., conceived the idea of collecting surface oil by means of absorbing it in blankets, and wringing the oil out. Great quantities were collected in this novel manner, and used for burning purposes in the lumber mills of the Oil Creek region. The oil produced from the oil springs became so necessary and useful as to suggest the formation of an oil company in 1854 called the "Pennsylvania Rock-Oil Company." This was the first Oil Company ever formed. This was prior to the sinking of any well, or before such a thing was suggested.

The Pennsylvania Rock-Oil Company purchased 100 acres of land on Oil Creek, below Titusville, for the purpose of collecting the surface oil. This project was, however, soon after abandoned, and the original Petroleum Company ceased to exist.

Although Professor Silliman, of New Haven, had in 1854 analyzed the rock-oil, and pronounced upon its properties, no further developments of any importance took place until the winter of 1857, when Colonel E. L. Drake, of Connecticut, arrived at Titusville, and was the first man who attempted to bore for oil. In December, 1857, he visited Titusville, examined the oil springs, and gave the subject of surface oil a thorough investigation. He soon concluded that rock-oil could be obtained by sinking a well; and acting upon this, he in company with James M. Townsend and E. B. Bowditch, leased the lands of the Pennsylvania Rock-Oil Company for the term of twenty-five years for the purpose of boring for oil. The operations were to commence the following spring. Soon after closing this lease, Colonel Drake and friends from Connecticut formed a company called the "Seneca Oil Company" for the purpose of working the lands and sinking wells under the management and control of Colonel Drake. Early in the spring he removed his family to Titusville, then containing not over one hundred and fifty inhabitants. He first informed himself thoroughly on the subject of boring, and visited the salt-wells on the Alleghany River for that purpose, where, after some difficulty, he employed a man who agreed to sink wells for the Seneca Company; but he and others to whom he had applied failed to keep their engagements, and it was not until the following spring that he could obtain a suitable person to commence the well. The first difficulty encountered was the surface water, which would flow into the well and undermine the earth, and cause it to cave in. In sinking the well it was supposed necessary to dig to the first rock; but in consequence of the earth caving in on the workmen so frequently, Colonel Drake invented the iron driving-pipe and mode of driving which is now in universal use, not only in the oil regions, but among the salt borers. He was obliged to go fifty miles to a machine-shop every time his tools needed repairing; but after many delays and accidents, on the 29th day of August, 1859, at the depth of 69 feet 6 inches, he struck a vein of oil, from which he afterward pumped at the rate of thirty-five to forty barrels per day. This is now known as the Drake Well, and was the first well ever sunk for oil, and the first petroleum ever obtained by boring.

Now commenced a scene of excitement beyond description. The Drake Well was immediately thronged with visitors arriving from the surrounding country, and within two or three weeks thousands began to pour in from the neighboring States. Every body was eager to purchase or lease oil lands at any price demanded. Almost in a night a wilderness of derricks sprang up and covered the entire bottom lands of Oil Creek. Merchants abandoned their store-houses, farmers dropped their plows, lawyers deserted their offices, and preachers their pulpits. The entire western part of the State went wild with excitement.



THE PHILLIPS WELL.

Very soon after the success of Colonel Drake, Messrs. Brewer, Watson, and Co. leased the farm of Hamilton M'Clintock, and commenced a well on it, which was successful at the depth of 70 feet. Then followed the sinking of many wells on the different farms on Oil Creek. The Barnsdell Mead and Rouse Well was opened in the spring of 1860. Then the Crosley Well in April of same year. During this summer many wells were opened in the vicinity of Tideoute on the Alleghany River. In June, 1861, A. B. Funk sunk a well 470 feet deep on the M'Ilheny farm, which was the first large flowing well. Then followed the Brewer, Watson, and Co. Well on the G. W. M'Clintock farm, the Phillips Well on the Tarr farm, the Willard Well on the H. M'Clintock farm, and the Rouse, Mitchell, and Brown Well on the Buchanan farm. This latter well flowed a stream of oil without pumping equal to one thousand barrels per day. Thousands of barrels of oil flowed into the creek before suitable tanks could be prepared to receive it.

In the midst of the excitement, from some cause unknown, the gas and oil from this well took fire, and, as described by an eye-witness, columns of black smoke rolled upward into the air, the blazing oil leaped heavenward, and, falling over on all sides from the fiery jet, formed a magnificent fountain of liquid fire. The sight was awfully grand, but, sad to relate, nineteen human beings were burned to death. Among them was Mr. Rouse, one of the proprietors of the well. Mr. Rouse lived for several days after being injured, and in framing his will, after making certain bequests, left to the County of Warren a handsome sum, to be applied one half for road purposes and one half to the poor of the county. This bequest is now valued at \$150,000.

The next large flowing well opened was the Empire, in the vicinity of the Funk Well, that flowed 3000 barrels per day. The Sherman Well was opened in April, 1862, then the Noble and Delemater Well in May, 1863. This celebrated well was commenced in 1860, and was bored to the depth of 167 feet and abandoned. Mr. Noble went further down the creek and became interested in other wells on the Tarr farm, but in the spring of 1863 he recommenced the work on his old well, and went down to the depth of 471 feet without having any indications of oil. At that depth he concluded to tube and pump, abandoning the idea of obtaining a flowing well, but to the great astonishment of himself and every one else, after pumping a very short time, suddenly the great Noble Well commenced to flow. Long before the opening of this well petroleum had become so plenty that most of the pumping wells were abandoned. Every person wanted a flowing well.

Samuel M. Kier, of Pittsburg, was the first man who refined the crude oil, and to him we are indebted for this discovery. W. H. Abbott, of Titusville, erected the first large refinery at that place, which was before the days of rail-

roads in that region. The heavy iron castings and machinery were brought in wagons from Union Mills and Franklin, through mud axle-deep. Parties interested with him became disheartened, and would have abandoned the enterprise had it not been for the energy of Mr. Abbott, who finally succeeded in completing his building.

Brewer, Watson, and Co. were really the great pioneers in the introduction of petroleum in large quantities. This enterprising firm expended the sum of \$750,000 in cash for barrels alone before they realized one cent of profit. All they required was the actual cost of the barrel. They have lived to reap a rich harvest from their arduous efforts in the introduction of petroleum, and have been handsomely repaid for the hardships and trials through which they have passed. During the summer of 1861, Samuel Downer, of Boston, established a branch of his works and commenced the refining of oil at Corry, and gave his entire attention to the business, and during that year his refinery absorbed nearly all of the oil product. George M. Mowbray, agent for Schefflin and Co., of New York, made the first extensive purchase of petroleum for shipment. Messrs. Drake, Watson, Brewer, Kier, Abbott, Mowbray, Downer, the firm of Brewer, Watson, and Co., and others, exerted their utmost endeavors to introduce the article, and to create a demand equal to the supply; but before this could be accomplished oil at the wells was offered for sale at prices ranging from ten to fifty cents per barrel, and thousands of gallons were allowed to run into the creek.

The only pumping wells opened at an early day, and not abandoned but worked until the present time, are the celebrated Economite Wells, located opposite the town of Tideoute, on the Alleghany River, in Warren County, Pennsylvania. These wells are four in number, and are each now pumping 30 barrels of oil per day. Many persons at the present time, in passing through the oil regions, wonder at the number of abandoned wells to be seen. These wells were not abandoned because the borers failed to discover oil, but simply because it did not pay to operate them when oil was so plenty and cheap and no great demand existed for it.

The entire oil regions of Pennsylvania, Virginia, and Ohio were consequently nearly deserted, and the then so-called "oil bubble" exploded. Most of those who had taken leases and had opened wells removed the tubing, and sold their engines, tools, etc., and retired from the oil trade disgusted with their enterprise, and, no doubt, much displeased with themselves, returning to their deserted homes to be ridiculed by the knowing ones, who "always said the undertaking would prove a failure."

Much time, however, did not elapse before a new demand for petroleum was created, and once more thousands poured into the oil regions; and to-day the use of petroleum is universal; and for a cheap and perfect burning oil it has

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THE NOBLE WELL.

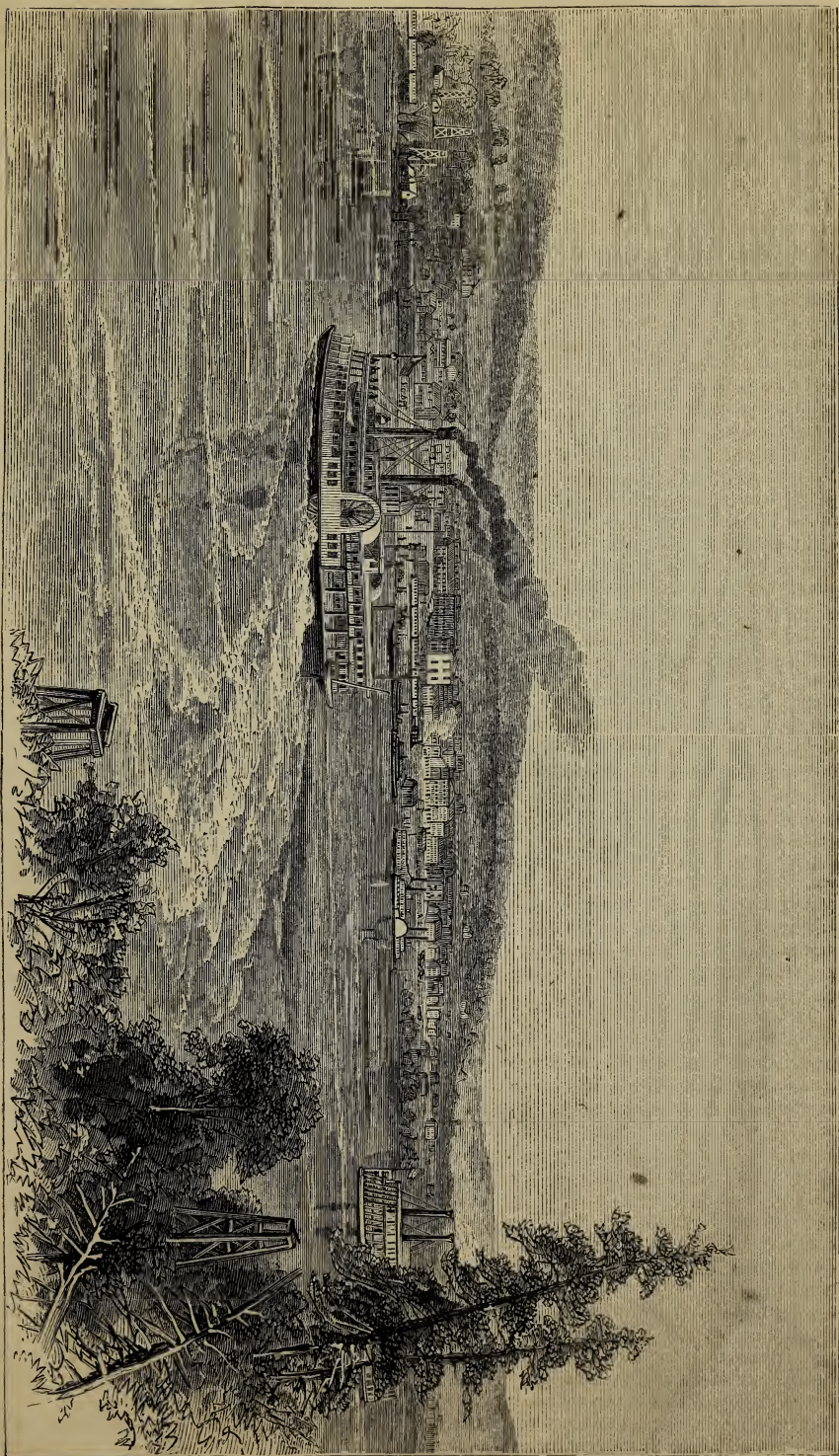
no equal. The old wells are being opened, and new ones going down every day. The Alleghany River, and its great northern tributaries, are no more crowded with long rafts of lumber floating with the current to the Western cities. Saw-mills have given place to oil refineries and producing wells. Tow-boats, filled with barrels of petroleum, take the place of lumber-rafts. Villages have suddenly grown into cities. The iron horse rushes with lightning speed around the base of the mountain and down the valley of oil. Rich farms are laid waste. The plow turns no more furrows. The scythe cuts no more bending grain. The farmer's barns are no more loaded down with the fruitful harvest. The farmer himself, with his homespun clothes, is seen no more in the fields. All is changed! The farm is sold! The old man and his grown-up sons are worth millions, and the old homestead is deserted forever.

Throughout the civilized world Petroleum stands among the foremost of all useful and desirable substances, and the Greasy Monarch takes his place beside Corn and Cotton as a great medium of exchange between the United States and foreign countries. It was not until the fall of 1860 that sufficient quantities were produced to give it a place and a quotation in the markets, although a large quantity had been shipped to different points, both in this country and Europe, for the purpose of introducing the new illuminator. Among others who took a lively interest in the oil discoveries was James M'Henry, Esq., of London, who sent for a large number of packages, and distributed them in England and upon the Continent. It was a slow process to introduce the article at all, and especially to persuade the dealers and consumers of whale-oil that petroleum would soon supersede all other oils. The foreign demand, however, increased, and the exports during 1861 reached 27,812 barrels; in 1862, 168,000 barrels; in 1863, 706,267 barrels. The opening of the Atlantic and Great Western Railway, in 1863, increased the amount, by conveying to the exporting cities large quantities that had been stored in tanks, this road alone transporting that year 533,487 barrels. The exports for 1864 were 776,205 barrels, this road transporting 675,028 barrels. The exports for 1865, from Jan. 1 to Nov. 11, were 543,019 barrels. The production of crude petroleum from March 3, 1865, to January 1, 1866, was as follows: Venango County region, 1,020,126 barrels; Western Virginia, 13,666; Ohio, 10,676; Kentucky, 2405. It will be seen from these figures that nine-tenths of all the oil produced in the United States comes from Venango County. There appear to be certain sections that Nature has set apart exclusively as deposits for coal, iron, gold, silver, and other minerals, which she has denied to other localities; and Venango County, above all other places in this country, is the chief deposit for oil. This has proved to be the case thus far, and there is every indication that the future discoveries will exceed the past, as the

county has not yet been one-tenth developed. The reckless spirit of speculation has nearly exhausted itself; and the increased facilities for communication and transportation mark a new era. The great drawback to legitimate business in the oil regions has been the discomforts of living. Now an effort is being made to build a town, which shall not only be the metropolis of the Petroleum Country, but its most beautiful and attractive city. Reno—a name well known in America as that of the brave General Reno, who fell at the battle of South Mountain—is the centre of Venango County, and geographically speaking, the heart of the great oil district. It possesses all the facilities of water communication with Pittsburg, and rail communication with the whole oil region and to all parts of the country. It is now destined to be the metropolis. The trade arising from the production and refining of petroleum is the most important business of several cities in Pennsylvania, Ohio, and New York, and affords employment and support for a hundred thousand people. The large portion of this business thus thrown into other cities will, with proper enterprise, be retained in Venango County. The crude oil will be refined in the region that produces it; the engines used in mining will be manufactured here, and so on through the long list of necessary articles. All the material for these various manufactures, including coal, can be obtained here more cheaply than any where else. Recognizing these facts, Hon. Charles V. Culver (member of the present Congress from the Venango District), and other wealthy business men associated with him, are devoting their energies in developing this rich territory, and incidentally building up a city that shall be commensurate with the business transacted in this region. They have entered upon the work with a wide and comprehensive view—not as a mere speculation, but as a legitimate business; and there is not a particle of doubt but that they will succeed beyond their most sanguine anticipations. They are now putting down fifty wells with the same deliberation, business calculation, and certainty of success that a coal company would sink a shaft.

The natural advantages of the town of Reno are very great—superior to those of any other point in the oil regions; and it is the centre of a railway system that includes the whole of the oil-producing territory. It is situated upon an elevated plateau overlooking the Alleghany River, which is navigable from this point to Pittsburg. Upon the river, and above high-water, there is a natural levee extending the length of the town. From the levee the ground rises abruptly about 20 feet, forming a terrace, upon which are laid the railway tracks, while the warehouses and shipping-yards adjoin. Separated from these, by a broad and beautiful avenue, the town is laid out upon a plateau, bending like a crescent with the sweep of the river; thence rising gradually and receding until it swells into the hills which border and

RENO.



overlook the town. These hills are well adapted to the building of elegant country seats. From their summits flow streams of the purest mountain-spring water—enough to supply the town for domestic purposes, and protect property against fire. Ground has been set apart for schools, churches, and other public purposes. There are already many substantial private and public buildings, and others in progress of construction. It has already one of the best newspapers in that section of country. With all these natural advantages, the centre of a system of railroads, located in the heart of the oil region, and fostered by men of business, liberality, taste, and wealth, and withal public-spirited, who have its advancement and prosperity at heart, Reno must of necessity be the Oil Metropolis of America.

The plan upon which the Company owning this valuable property has been managed is worthy of note. They accepted the doctrine that Petroleum was a business, and not a speculation, as the basis of their action. They recognized it as a commanding staple in American commerce and manufactures, and worthy of the honor paid to gold and iron and silver. They wished to avoid the suspicion that the failure of many companies had thrown upon the petroleum business. They desired to attract good men to Reno, and at the same time impose upon them no loss. So they designed the singularly novel plan of issuing a Guaranteed Stock. This was a novelty in American finance. The owner of stock had every chance of profit, and no want of security. His stock became a legal tender oil stock—a sight draft on New York, collateral security on a loan, as convenient as a greenback, and as reliable as a Seven-Thirty. Mr. Culver, in selling the lands, offered to wait until development proved their value before taking his money. Accordingly, for every share of stock sold—one hundred dollars—its par value was placed in the hands of trustees, who deposited it in the United States Treasury, or invested it in Government securities.

In the mean time the work of development proceeded. The working fund was fixed at five hundred thousand dollars, the largest ever held by any one Company—larger, indeed, than the capital stock of most companies. The territory had room for one thousand wells, without interfering with each other. The test wells previously sunk had shown the existence of oil in every well in paying quantities, a result that no other Company had shown. Fifty wells were at once contracted for, and arrangements made to put down three hundred. The town rapidly expanded. The town-lots are in the market, selling rapidly, and trade of every kind is extremely active. This sensible plan of managing Petroleum is too new at this time for us to speak fully of its results; but it marks an era in the history of this important business, which forever places it above the reach of mere speculators, and at the same time gives Petroleum a permanent Metropolis.

A new feature in the oil regions is the transporting of oil through pipes long distances. The pipes are two inches in diameter, laid just below the surface of the ground. The oil is forced through the pipes under a pressure of from 500 to 600 pounds per square inch. The elevation to the highest point is about 350 feet. The quantity of oil discharged from the end of the pipe is between twelve and fourteen hundred barrels in twenty-four hours. The cost of transportation is \$1 per barrel; cost by teams in spring and fall is generally \$3 to \$3 50 per barrel. Messrs. Reed & Cogswell, engineers, of 6½ Liberty Street, New York, have built the pumps and boilers, and put in successful operation two lines of pipes from Pit Hole to Miller Farm, a distance of about six miles. They have also furnished the machinery and put in successful operation two other lines, each nine miles in length.

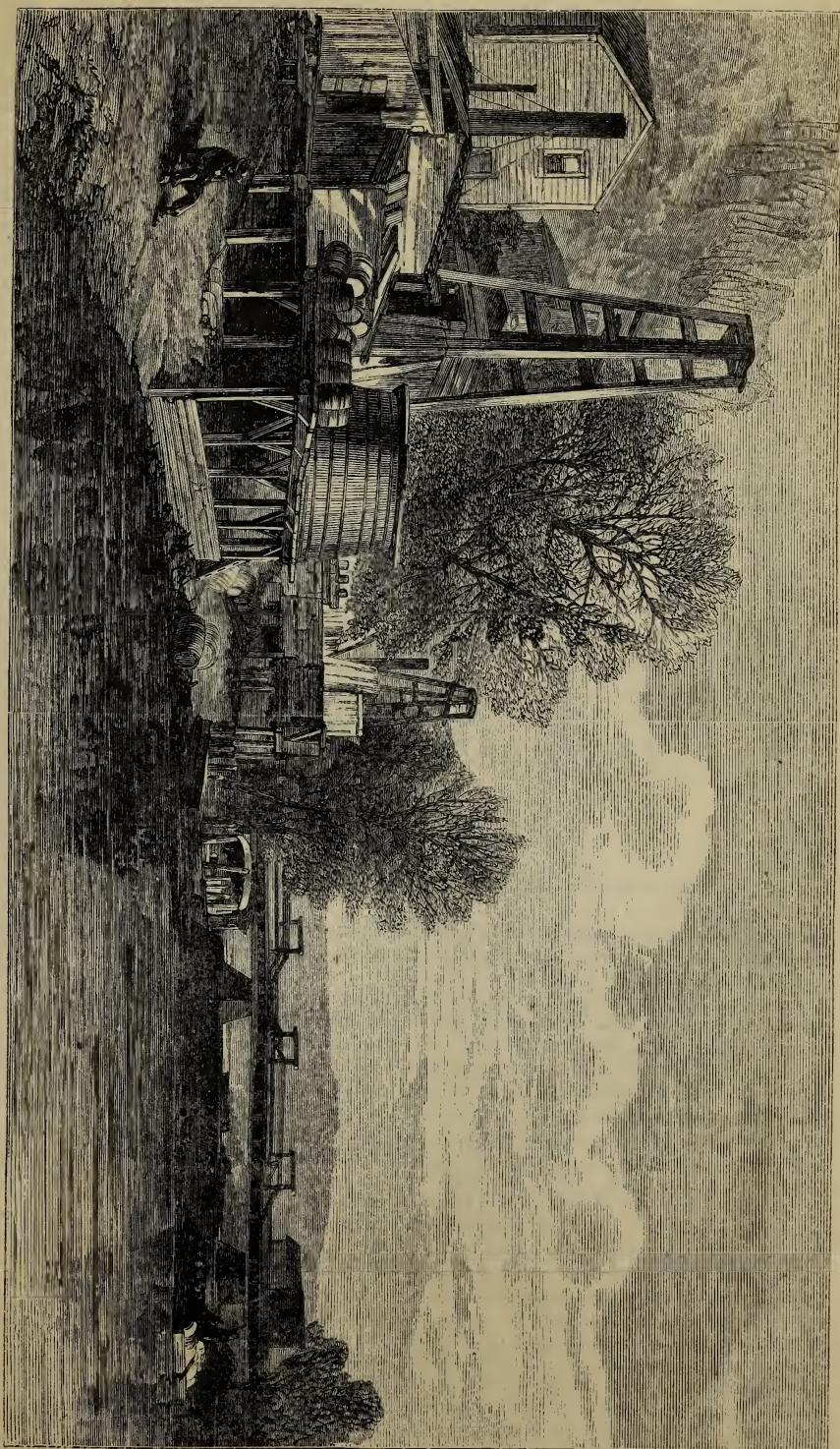
In passing through the oil regions of Pennsylvania one is struck with the primitive mode used in obtaining oil. Inferior machinery and exceedingly small engines are used in most cases, with hardly sufficient power to raise the sucker-rod out of a deep well. Yet wells are worked in this manner, only producing from one to three, or perhaps five, barrels of oil. Often they entirely fail to get a drop of oil. In such cases the wells are abandoned as worthless. At the same time, if the proper machinery had been applied with more powerful engines, twice or thrice the yield might have been obtained. The air-pump is a great improvement, and its application will no doubt add at least thirty per cent. to the yield of all wells to which it is applied.

Next in importance to the Alleghany River is Cherry Run, on which stream is located the great Reed Well. In January, 1865, the first large flowing well was struck on Pit-Hole Creek, on the Holmden Farm, situated four miles above the mouth of the Creek, and about three miles due east from Funkville, on Oil Creek. In eighteen months a city has grown up, and Pit-hole is now the terminus of two railroads.

The oil regions are dotted here and there with refineries, where the crude oil is distilled and prepared for burning purposes. Many changes have taken place, and vast improvements made, in the refineries of oil since the first were erected.

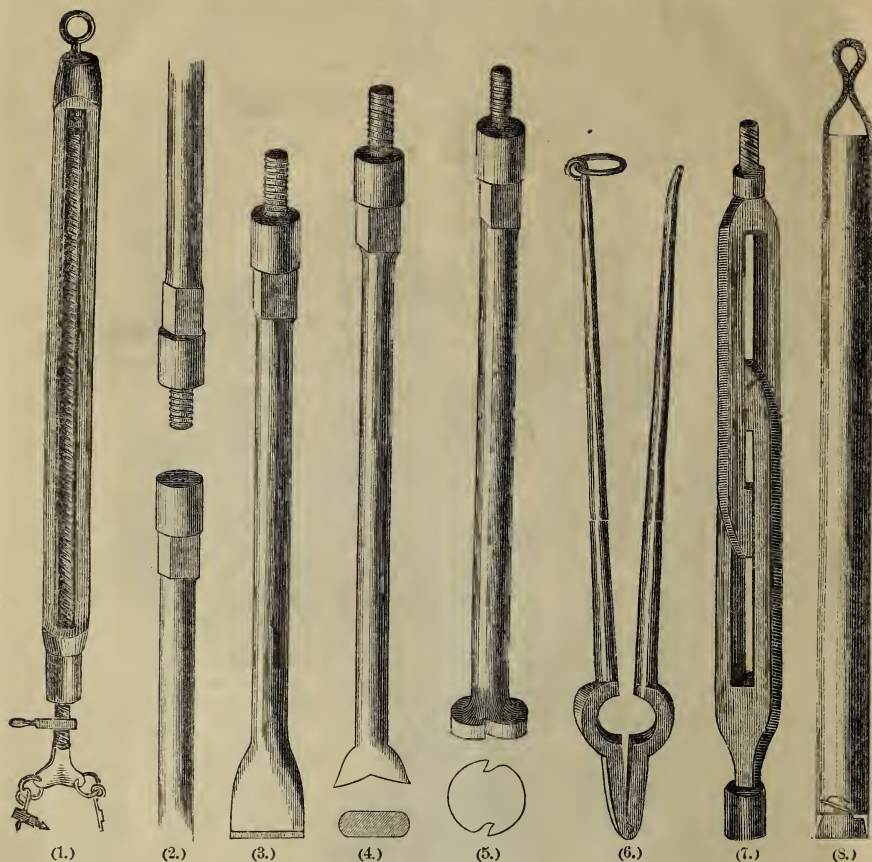
In sinking a well for oil many curious and wonderful discoveries have been made. On the lands belonging to the Story and M'Clintock Petroleum Company, of New York, located on Caldwell's Creek, near Titusville, in sinking a well in October last the drillers passed through a layer of rock four feet in thickness, at the depth of forty feet; and another layer, six feet thick, at the depth of fifty-six feet; and at the depth of seventy feet, after passing through two thick layers of hard rock, the drill passed through a log eighteen inches in diameter.

Oil wells are put down to a variety of depths, from 100 to 1100 feet. The mode of sinking a well is as follows: After the spot is decided



PUMPING WELL NEAR OIL CITY.

IMPLEMENTS USED IN BORING.

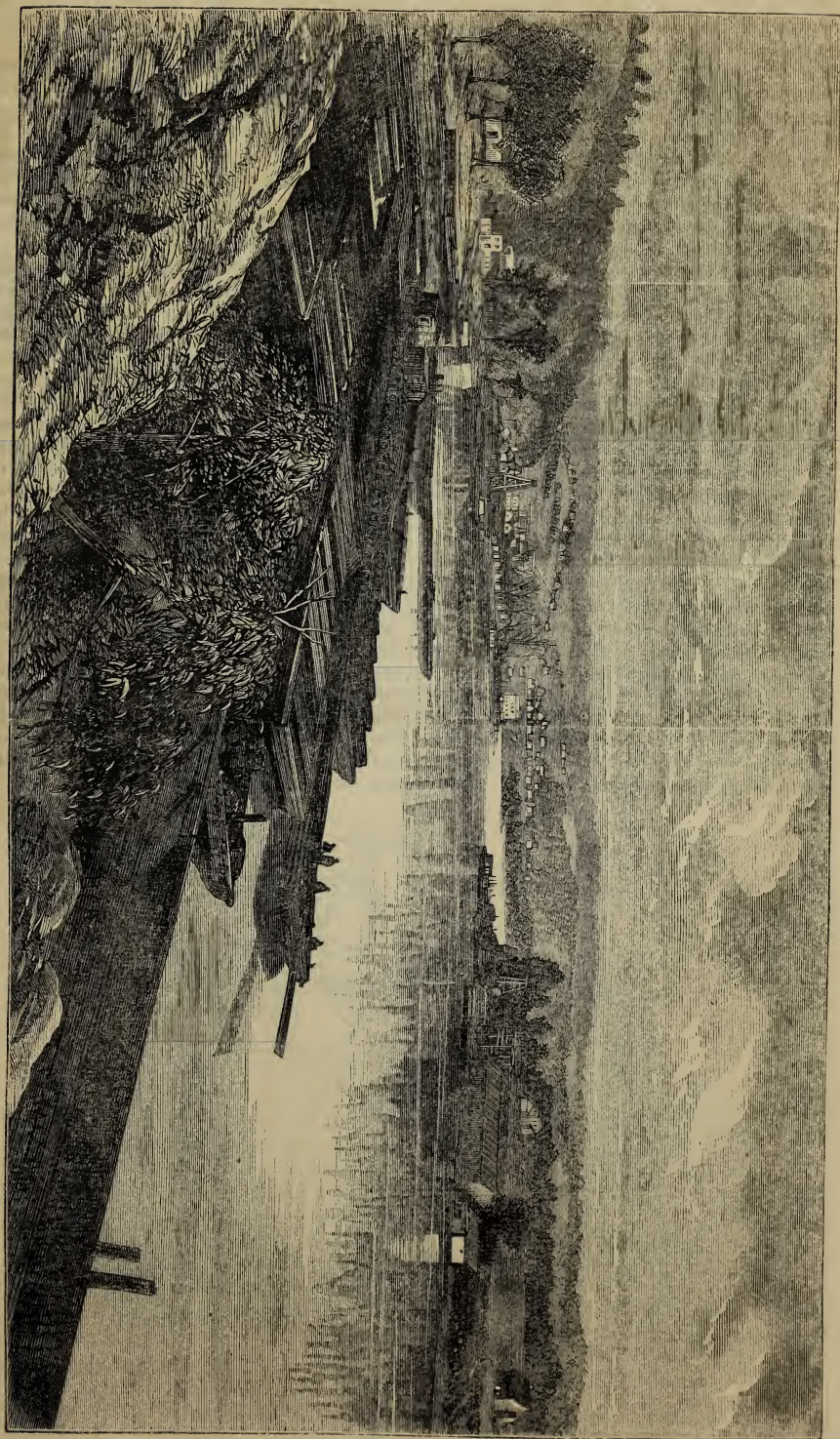


1. Temper-Screw.—2. Drill-Stem.—3. Drill.—4. Reamer.—5. Round Reamer.—6. Pipe-Tongs.—7. Jarr.—8. Sand-Pump.

upon, which is in most cases in the lower bottom lands, a stake is driven into the ground at the spot where the bore is to be commenced. A derrick is built, from twelve to sixteen feet square at the base, and about forty feet in height, running to a point at the top. The engine-house is erected, and the necessary machinery made ready within. Sections of iron pipe, six inches in diameter, are then driven into the ground, by means of a pile-driver, until the first layer of rock is reached, which, in most cases, is found at a depth of thirty-five or forty feet below the surface of the ground. Great care is taken that this iron pipe is driven plumb. After the rock is reached, and the earth within the pipe is removed, a block and tackle is rigged at the top of the derrick, and the drilling tools, weighing in some cases 900 pounds, are hoisted up and dropped into the driving-pipe down to the rock. A temper-screw is then attached to the top of the drill by means of a rope, and made fast to the end of a walking-beam. The walking-beam is a heavy horizontal piece of timber, supported in the centre by a Samson-post. The other end of the walk-

ing-beam connects with the driving pulley by means of a crank. The engine drives the pulley, the end of the walking-beam rises and falls, and thus the drill is raised and lowered at will. At intervals, during the process of drilling, a tool called a "Reamer" is inserted in the well, and the bore is increased to the proper size. A sand-pump is a metal case from five to ten feet in length, constructed with a valve at the bottom. This sand-pump is lowered into the well at intervals, and when it reaches the bottom the valve opens and admits the borings, and when the pump is raised the valve closes, and the contents are brought to the surface. After the bore is thus cleaned the drill is once more inserted, and the drilling is continued.

In boring a well a correct journal is kept, showing the different kinds of rock and earth passed through, and the exact points where water-courses, gas, or shows of oil are found. If a large vein of oil is struck, the well is immediately tubed with a 2 or 2½ inch iron pipe, put together in sections. The water from water-courses and the surface water is prevented from flooding the well by means of a leathern bag,



OIL CITY.

called a seed-bag, filled with flax-seed, which is placed on the outside of the tubing and within the earth chamber below the water-courses. When the flax-seed becomes saturated with water it swells, and completely shuts off all communication with the bottom of the well on the outside of the tubing.

If the vein of oil struck proves to be large, and the pressure of gas is sufficient, the oil will flow out without the aid of a pump; but in most cases a pump is required, in which case a copper working barrel is placed at the bottom of the well, and attached to the lower section of the tubing, with a valve at the bottom. The upper valve is connected with a sucker-rod, the end of which is attached to the end of the walking-beam. The tanks or tubs to receive the oil are mostly made of wooden staves, and are located at some distance from the well, and are connected with it by means of iron tubing attached to the spout of the pump, and through which the oil flows.

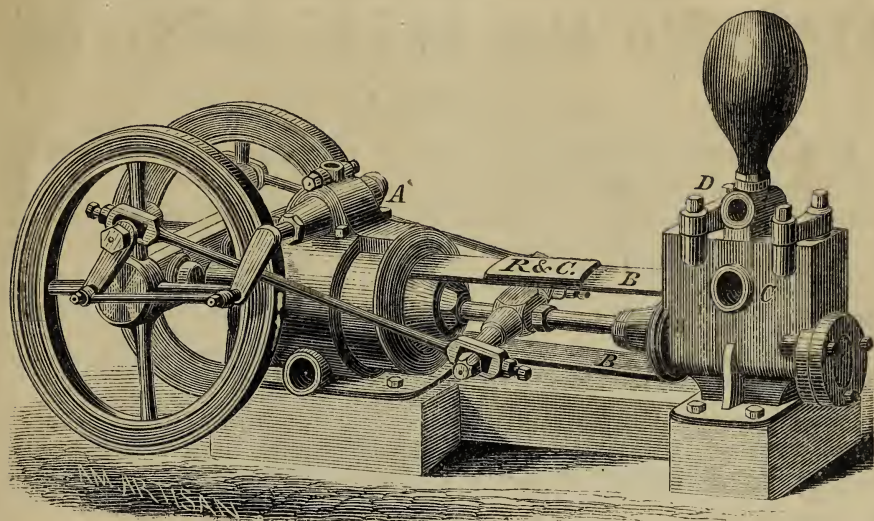
It is almost impossible to give the exact cost of sinking and completing a well at this time. Prices vary in different localities, and the cost of drilling ranges from two dollars to three dollars and a half per foot. Including all of the necessary equipments, the present cost of sinking a well complete would be between five and six thousand dollars.

Naphtha, the lightest variety of petroleum, is found in Persia. It consists of carbon 82.20, and hydrogen 14.80, and is the only fluid free from oxygen. The next variety found is the petroleum proper, or American petroleum, which is a much heavier and thicker fluid. Another

variety is found, called maltha, which is less fluid than petroleum, resembling tar or pitch. In Derbyshire is found still another variety, called "elastic bitumen," which is flexible and elastic, and about the weight of water. The last variety, called "compact bitumen" or asphaltum, is black in color and solid like coal; its specific gravity is 1 to 1.6. In the island of Trinidad is a lake, three miles in circumference, that is now one solid mass of black compact bitumen, which is supposed to have been at one time a lake of liquid petroleum.

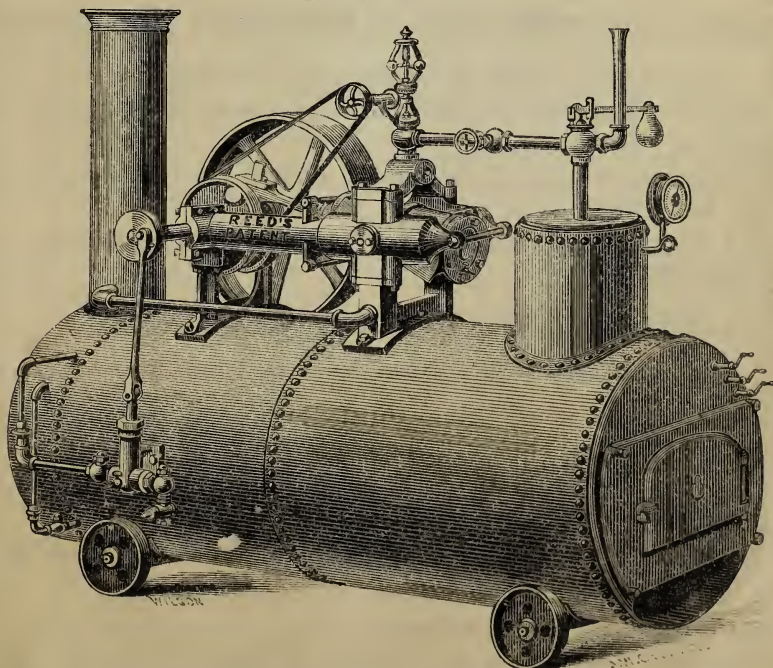
No positive conclusions have yet been arrived at, giving any correct idea of how deep down in the earth the greater basins of petroleum are to be found. The oil from the largest flowing and pumping wells so far discovered is obtained from beneath the third sandstone. Several large producing wells have been sunk without finding this third sandstone. It is, however, believed by most of the experienced borers that the great basins are yet to be discovered at the depth of from 1500 to 3000 feet, where a never-failing supply of petroleum will be reached. It is believed by some that the formation of petroleum is still rapidly going on in the laboratories of Nature, and that enormous quantities of carbonated hydrogen gas, which accompanies the oil, is undoubtedly evolved in its formation, and were it not constantly forming would soon all escape, and flowing wells would be an impossibility. It is impossible, however, to fathom the hidden mysteries of the petroleum world below. Astronomy can pierce the depths of space, but Geology can only guess what is going on a few thousand yards below our feet.

REED & COGSWELL'S RELIABLE STEAM PUMP.



By reference to the above cut it will be seen that special care has been taken in the construction of this pump to guard against the chief causes of derangement so often occurring where life and capital are involved. First, the pistons are connected to two wheels with heavy rims which give a positive motion, and so regulating and controlling all the working parts that the pump can be run at a very low speed without stopping, as is desirable in feeding boilers; and in case of fire or leakage in a boat a high speed may be attained without derangement by sudden concussions, as is often the case where there are no wheels to control the piston. Another desirable feature of this pump is the construction of the water valves and their seats, together with the manner of getting at them to remove sticks or other substances which are liable to lodge and hold the valves open. The four valves can be taken out by removing two screws, and the whole replaced and the pump put in operation in two minutes. These improvements are the result of a long experience in this most difficult branch of mechanics. These pumps have been in operation during the past year in the Oil Regions of Pennsylvania, forcing oil over mountains a distance of *six miles* under a pressure of 600 pounds to the square inch, with perfect success. A third line is now nearly completed of nine miles length. These pumps may be seen in operation at the Emporium of REED & COGSWELL, 63 Liberty Street, New York.

REED'S PATENT CONSOLIDATED ENGINES,



63 LIBERTY STREET, NEW YORK.

The exceeding simplicity of this engine renders it second to none for portable purposes, especially for Mining, Boring and Pumping Oil and Salt Wells. Also, for Saw-Mills, Quartz-Mills, and all kinds of Manufacturing where engineering skill and repairs are difficult to obtain. These engines have been in use for the above-named purposes during the last *twelve years*, proving their superiority over other engines for durability and economy.

THE

ATLANTIC AND GREAT WESTERN RAILWAY,

Commencing at Salamanca, where connection is made with the Erie Railway from and to all Eastern points, extending 338 miles to Dayton, and from thence over the Cincinnati, Hamilton & Dayton Road, 60 miles, to Cincinnati, and 215 miles from Salamanca to Cleveland, with its numerous and important connections with other lines of railway, is now acknowledged to be

THE GREAT THROUGH ROUTE.

It will be seen, by an inspection of the accompanying Map and List of Stations, that its connections East and West are very extensive, affording the traveler and shipper great facilities for communication.

This is the direct line between Cincinnati, Louisville, Nashville, Indianapolis, Cairo, Memphis, New Orleans, St. Louis, and Chicago to all Eastern cities.

Close connections are made with all connecting lines going East and West; and the facilities for transfer are unequalled. To families this route offers superior attractions with its broad, roomy cars, and

NO CHANGE FROM NEW YORK TO CINCINNATI OR CLEVELAND.

The cars are new, perfectly ventilated, and supplied with every convenience. The sleeping-cars are especially commended, and are the very best in use.

The eating-houses, and the meals served up in them, are all that can be desired.

Speed, safety, and comfort are guaranteed to all who may travel over the line.

FARE AS LOW AS BY ANY OTHER ROUTE.

BAGGAGE CHECKED THROUGH.

TICKETS for sale at all principal offices East, South, and West, and at the following offices of the Company:

NEW YORK—No. 233 Broadway.

BOSTON—No. 15 State Street.

CLEVELAND—Union Office, and at the Atlantic & Great Western dépôt.

CHICAGO—No. 66 Clark Street.

CINCINNATI—No. 80 West Fourth Street, northwest corner Broadway and Front Street, and at the Cincinnati, Hamilton & Dayton and Atlantic & Great Western dépôt.



STEINWAY & SONS' GRAND, SQUARE, AND UPRIGHT PIANO-FORTES

Are now acknowledged to be the best instruments in America as well as in Europe, having taken Thirty-two First Premiums, Gold and Silver Medals, at the principal fairs held in this country within the last ten years, and in addition thereto they were awarded a First Prize Medal at the Great International Exhibition in London, in 1862, in competition with two hundred and sixty-nine pianos from all parts of the world.

Among the many and most valuable improvements introduced by Messrs. STEINWAY & SONS in their Piano-Fortes the special attention of purchasers is directed to their

PATENT AGRAFFE ARRANGEMENT.

The value and importance of this invention having been practically tested, in all their grand and highest-priced square Piano-Fortes, and admitted to be the greatest improvement of modern times, they now announce that their "PATENT AGRAFFE ARRANGEMENT" will be introduced in every Piano-Forte manufactured by them, without increase of cost to the purchaser, in order that all their patrons may reap the full advantage of this great improvement.

Extract from the Testimonial of the most distinguished Artists to STEINWAY & SONS.

"Among the chief points of the uniform excellence of the STEINWAY Pianos are :

"Greatest possible depth, richness, and volume of tone, combined with a rare brilliancy, clearness, and perfect evenness throughout the entire scale, and, above all, a surprising duration of sound, the pure and sympathetic quality of which never changes under the most delicate or powerful touch.

"We therefore consider the STEINWAY Pianos in all respects the best instruments made in this country or in Europe, use them solely and exclusively ourselves in public or private, and recommend them invariably to our friends and the public.

"S. B. MILLS,
ROBERT GOLDBECK,
HENRY C. TIMM,
GEORGE W. MORGAN,
THEO. THOMAS,

WILLIAM MASON,
ROBERT HELLER,
WILLIAM BERGE,
E. MUZIO,
CARL ANSCHUTZ,

A. H. PEASE,
F. L. RITTER,
THEO. EISFELD,
C. BERGMANN,
MAX. MARETZKE,"

AND MANY OTHERS.

STEINWAY & SONS' WAREROOMS,
71 AND 73 EAST FOURTEENTH STREET,
BETWEEN UNION SQUARE AND IRVING PLACE,
NEW YORK.



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RENO OIL AND LAND COMPANY,

CAPITAL STOCK, \$10,000,000.....SHARES, \$100 EACH.

STOCK GUARANTEED

By deposit of One Hundred Dollars (the par value of each share) for every share of guaranteed stock issued, in the hands of trustees, to be by them placed in the *Treasury of the United States* or invested in *Government Securities*, as a pledge for each share's IMMEDIATE REDEMPTION AT PAR, thus making it equivalent to

A LEGAL TENDER OIL STOCK.

PRESIDENT, GALUSHA A. GROW.
SECRETARY, WILLIAM BROUGH.

VICE PRESIDENT, CHARLES VERNON CULVER.
TREASURER, ROBERT F. BROOKE.

Directors:

HON. GALUSHA A. GROW, RENO, PA., late Speaker of the United States House of Representatives.
HON. C. R. RANSOM, BOSTON, MASS., United States Bank Commissioner for New England.
HON. SIDNEY DEAN, PROVIDENCE, R. I., late Member of Congress; Editor of "Providence Press."
HENRY A. SMYTHE, ESQ., NEW YORK CITY, President of the Central National Bank of New York.
LUCIEN H. CULVER, ESQ., NEW YORK CITY, of Culver Penn & Co., Bankers.
HON. AUGUSTUS FRANK, WARSAW, N. Y., Member U. S. House of Representatives, 36th, 37th, and 38th Congresses.
MAJOR JOHN L. WILSON, MADISON, IND., late of the United States Army.
HON. THOMAS STANFIELD, SOUTH BEND, IND., President of the First National Bank of South Bend.
HON. CHARLES VERNON CULVER, FRANKLIN, PA., of Culver, Penn & Co., and Member of the present Congress.
ALEXANDER BRADLEY, ESQ., PITTSBURG, PA., President of Tradesmen's National Bank of Pittsburg.
JOSHUA DOUGLASS, ESQ., MEADVILLE, PA., President of the National Bank of Crawford County, Pa.
COLONEL JAMES H. BOWEN, CHICAGO, ILL., President of the Third National Bank of Chicago.
GEORGE H. REA, ESQ., ST. LOUIS, MO., President of the Second National Bank of St. Louis.

Trustees of the Fund:

HON. JOHN J. CISCO, NEW YORK CITY, of John J. Cisco & Son, Bankers, and late Assistant Treasurer of the United States at New York.
DENNING DUER, ESQ., NEW YORK CITY, of James G. King's Sons, Bankers.

The Reno Oil and Land Company own TWELVE HUNDRED ACRES OF LAND at Reno, Venango County, Pennsylvania, the centre of the great oil district. This embraces one of the largest estates held by any one company in the Oil Region, and includes

The Thriving and Beautiful Town of Reno.

The lands were selected some years since by Hon. Charles V. Culver, the present representative in Congress from the Venango District, Pennsylvania, and the senior member of the Banking House of Culver, Penn & Co., New York City, as the apparent deposit of inexhaustible supplies of oil, and the site best adapted for building the

EMPORIUM AND METROPOLIS OF THE OIL REGIONS.

This Company has peculiar and extraordinary advantages, and is managed upon a basis so novel and fair that it combines PROFIT AND SECURITY AS AN INVESTMENT, and at the same time presents unusual opportunities of gain.

One Thousand Wells

Can be sunk upon the property without interfering with each other, as there are four miles of boring territory; and it is the intention to sink Three Hundred Wells as soon as practicable, or enough to thoroughly develop the property. One hundred wells, yielding only ten barrels a day each, at six dollars a barrel—a price much below the average price at Reno—would give one million eight hundred thousand dollars a year of income, making a profit of probably fifteen per cent. over expenses and taxes of every kind. If large flowing wells are found, a single acre of the territory may yield the entire capital within two years.

Fifty Wells are now Going Down,

Under the personal superintendence of Mr. Grow, the President of the Company, who is at Reno. As an evidence of the great value of the Reno oil lands, the United States Revenue Commission, in its Report to the Treasury Department, February, 1866, showed that of the only four farms in Venango which had every well producing those embracing the Reno estates were included. A few test-wells have only been sunk on the farm.

Every Well Producing Oil

In paying quantities. The town of Reno is now the principal Petroleum station on the Atlantic & Great Western Railway, the terminus of the Reno, Oil Creek and Pithole Railway, and will soon be the intersecting point of several roads now in process of construction, in time becoming THE GREAT RAILWAY CENTRE OF THE PETROLEUM REGIONS—the centre of freights, and business, and manufactures. The river front is extremely valuable, being a mile and a half in extent, and above high-water mark. The annual freshets can not wash the town away. The progress of development is earnest and energetic, lots are being sold, and the town is rapidly growing. Every care has been taken to make it the MOST BEAUTIFUL TOWN IN THE PETROLEUM COUNTRY. The sale of liquor is prohibited in all leases. Oil mining and oil refining are prevented; streets are graded, and sites set apart for churches, schools, and public buildings. The stock of this Company

Is Guaranteed against Loss

By depositing the par value of each share sold—one hundred dollars—in the hands of John J. Cisco, late Assistant Treasurer of the United States at New York, and Denning Duer, Esq., Trustees, to be by them deposited in the National Treasury, or invested in Government securities, and may be

Withdrawn by the Stockholder at any Time.

This security makes the Reno stock one of the safest and most convenient investments in America. It is virtually a sight draft on New York, or a certificate of deposit, and may be used as collateral on a loan, or in any of the uses of business or exchange. It might be called in every respect A LEGAL TENDER OIL STOCK. Each full paid share of guaranteed stock is sold at one hundred and five dollars—one hundred dollars as par value, and five dollars as a contribution to the working-fund. This fund is

The Largest Working-Fund of any Company

Ever organized in America, and will be accepted as an assurance on the part of the Company that they make PETROLEUM A BUSINESS AND NOT A SPECULATION. By the payment of ten dollars persons desiring to await the result of the first years development can secure the right or option of obtaining a full paid share of guaranteed stock, by the payment of an additional one hundred dollars at any time while the books are open before April 1, 1867.

The Reno stock has every chance of great profit, and is always convertible into cash at par. Subscriptions will be received by agents, and by the principal banks and bankers throughout the country. Prospects and other information will be furnished by the agents and by

SAMUEL T. HOWARD, General Subscription Agent, 21 Nassau Street, New York.



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MAP OF THE
ATLANTIC AND GREAT WESTERN RAILWAY
AND CONNECTIONS.

[See Appletons' Railway Guide.]